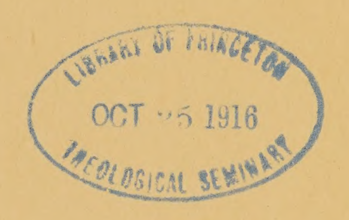
The Seven Wonders of the Ancient World

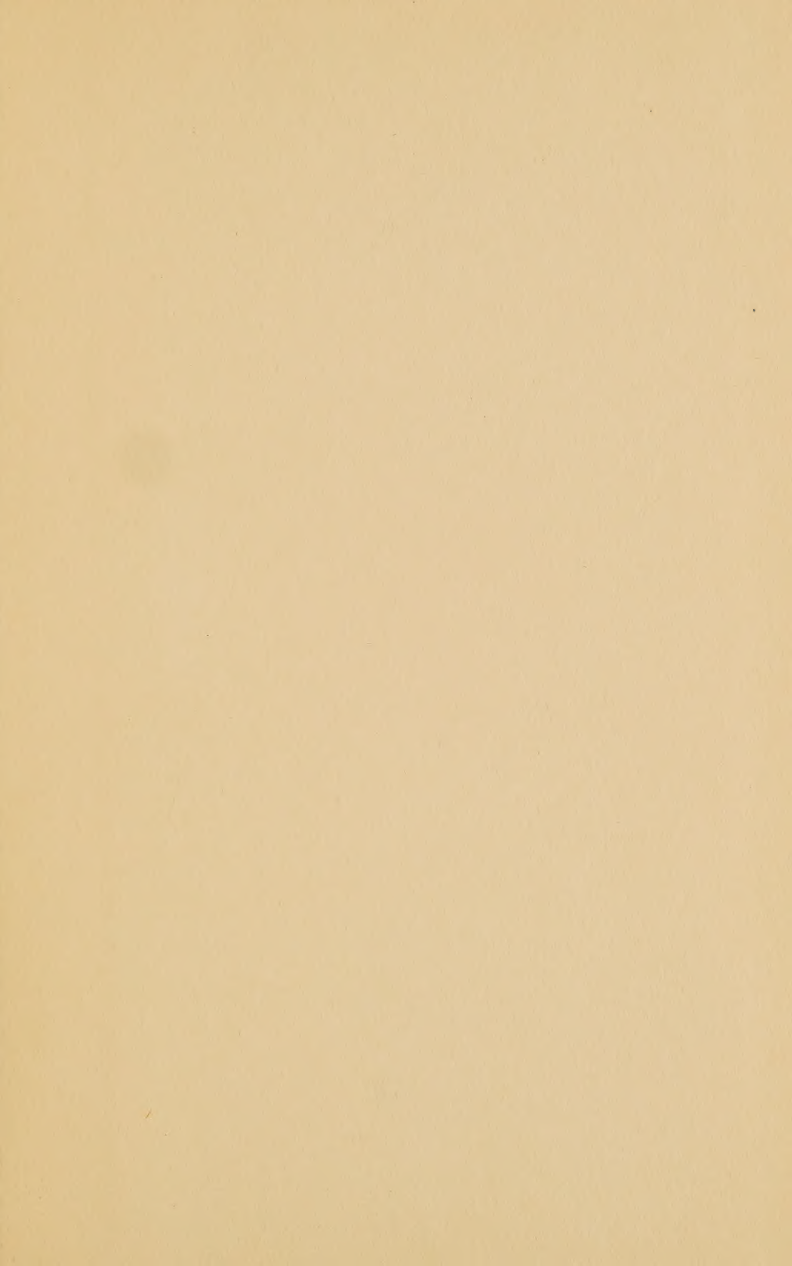
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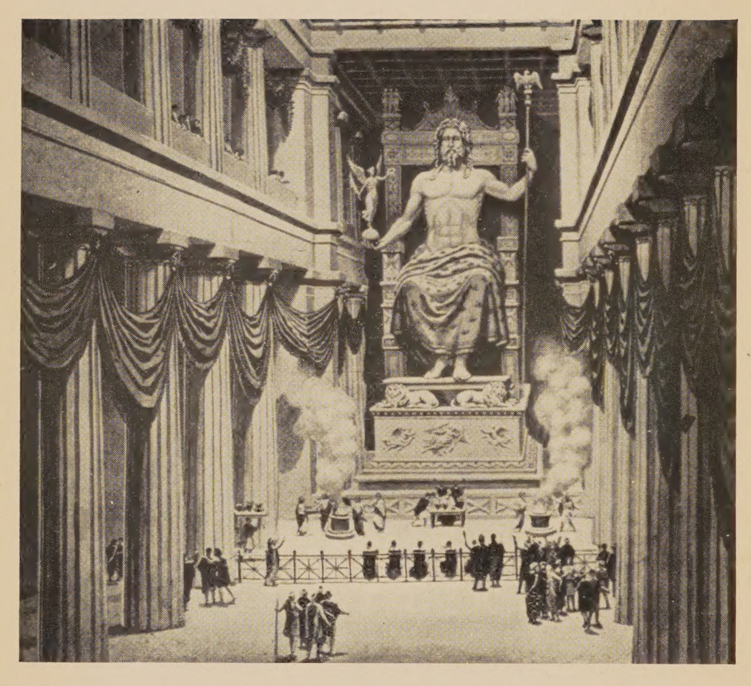




By Edgar J. Banks.

Bismya.

Seven Wonders of the Ancient World.



Reconstruction of the Olympian Zeus

The Seven Wonders of The Ancient World

By

Edgar J. Banks, Ph.D.

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Preface

THE editor of a monthly periodical once desired a short article on the Seven Wonders of the Ancient World. To write it seemed an easy task, for long wanderings in the Orient had led me to the sites of several of these ancient marvels, yet when I attempted to name them, I could not. Dismayed at my ignorance, I asked my learned friends to name them; they succeeded no better. I consulted the encyclopædias only to find that some of the ancient wonders were not considered worthy of a brief descriptive paragraph; the information given of others was meagre and antiquated. Confident that scores of authors must have been inspired to write books about them, I searched through the largest of the libraries. The discovery of two books was the reward. One was a dissertation in Latin by a student in his quest for a university degree; the other, a generation old, related the familiar facts

surviving from ancient times; it ignored the valuable results of modern research.

Early travellers were fond of describing the Seven Wonders; the generations of the past two thousand years have talked about them and wondered, but it is to the archæological explorer of the past few decades that we are indebted for our more trustworthy information. The material collected for the contemplated magazine article expanded wonderfully. Generally accepted fancies were found to be erroneous. The old familiar pictures of how it was thought the Seven Wonders ought to have looked were chiefly imaginary. Research among their ruins has not only revealed their history, and made their reconstruction possible, but has taught us why they were the wonders of the world.

About two centuries before the Christian era, in the Palestinian city of Sidon, lived a man named Antipater. He was the Baedeker of antiquity, the author of a guide-book. Perhaps he was not the first to attempt to point out to the traveller the things which he should not fail to see, but to him may be traced the list of the objects which won the admiration of the world, and which was

copied by other writers until it became authoritative.

Discriminating indeed was Antipater in confining his list of wonders to the sacred number of seven, when it might well have been extended to seventy times seven. Nor was he prejudiced in favour of any one land or age. Europe, glorying in the culture of Athens and Rome, could claim but one of the wonders. Three were in Asia, two in Africa, and one on an island in the sea. In point of time they represent a period of about three thousand years. The list is as follows:

The Pyramid of Khufu, from about 2900 B.C., or earlier.

The Walls of Babylon, from between 605 and 562 B.C.

The Statue of the Olympian Zeus, from about 470 to 462 B.C.

The Temple of Diana, from after 356 B.C.

The Tomb of King Mausolus, from about 353 B.C.

The Colossus of Rhodes, from 280 B.C.

The Pharos of Alexandria, from 247 B.C.

It is a common weakness of modern man to imagine that his own age and his own country has

progressed beyond all others, yet he is never more amazed than when he wanders among the ruins at Karnak, or looks up to the great stones high in the temple wall at Baalbek, or, standing upon the Athenian Acropolis, he pictures the glory that was Greece, or when he sees the magic touch of the creator of the Venus of Milo: yet none of these wonderful things were accounted worthy of a place among the Seven Wonders. The deeper the excavator delves into the ruins of the past ages, thc more he realizes that the ancients erected structures by the side of which the modern sky-scraper is insignificant; that they worshipped in temples far more wonderful than our greatest cathedrals; that they buried their dead in tombs which no modern millionaire could afford to build; that they produced an art which the modern world has yet unequalled; and of all the wonders of the earlier days of the world those described in the following pages were regarded by the ancients themselves as the most wonderful.

E. J. B.

ALPINE, N. J.

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THE FIRST WONDER

The Pyramid of Khufu



The Pyramid of Khufu

MODERN man is taught to believe that he has a soul, a single soul, and his ideas of that one soul are vague indeed. The ancient Egyptian thought himself more richly endowed. He believed that he had five souls, and each of those five souls he professed to understand. There was the *ka*, the part of him which required food and drink, not only in life, but during all the long ages in the tomb. There was the *bai*, the soul which hovered about the tomb in the form of a bird, and which, on some far distant day, would return to the body to bring it back to life. There was the *ran* or the name, the *khibet* or the shadow, and the *khat* or the corpse. To care for these five souls all his life long gave the Egyptian trouble enough; to provide for them during the long sleep in the tomb was the one great purpose of his life. He feared that his *ka* might suffer hunger and thirst, and there be none to bring relief, or that some day the *bai* might return to

find the body destroyed, and the homeless soul would wander restlessly about through all of the ages to come.

It is not strange, then, that the first duty of the Egyptian was to provide for his souls. The exceedingly dry climate of the Nile Valley favoured him. His body, if left exposed, withered away until only the skin and the bones were left, and, if not molested, it would so remain indefinitely. To preserve the body in a more natural state by artificial means demanded all the skill of the scientists, and gave employment to an army of people. Sometimes the shrinking skin was stuffed with sawdust or with sand. Sometimes the body was preserved in a solution of salt, or, if there were wealth sufficient to defray the cost, the visceral parts were carefully removed, and preserving herbs and spices were inserted in their place. So the mummies were formed, and each mummy, with food and drink for the *ka*, or with wealth to obtain it, was hidden away in a strong or secret place, to await the return of the *bai*.

In the very early days, when life was simple and grave robbers few, the Egyptian was content with a simple grave. A hole was dug in the sand; the

body was placed within in a sitting position; a dish of food and a pot of grain were at its side; poles and brush were laid over the hole, and sand was heaped above. Thus the first pyramid, a little pyramid of sand, was formed. Some, desiring a better tomb for their dead, lined the hole in the sand with boards; others, wishing to have access to the body that they might bring it fresh supplies of food and drink, built a passageway down through the sand to a door in the side of the tomb. With the years the wealth of the people increased; the tombs kept pace, and the pyramids of sand rose higher. Sometimes, to hold the heap of sand in place, a retaining wall of bricks was built about it. In time the wall rose to cover the sand, and then the pyramid was all of bricks; later it was of stone. Centuries passed; life became complicated; the size and the magnificence of the tombs grew with the increasing wealth; rare treasures were buried with the dead, and the grave robber flourished. Each king sought to erect a tomb more magnificent and more secure than any before him, where his mummy and his *ka*, satisfied with an abundance of provisions, might await in perfect security the far distant day when the *bai*

should return. So the rocky cliffs bordering the valley, and the valley too, abounded with myriads of wonderful tombs.

Three dynasties of kings had ruled Egypt and passed away. The fourth came with Khufu, or Cheops, as some call him; the Egyptians spelled his name Hwfw. Just when Khufu lived scholars are uncertain, for it is difficult to determine with accuracy the dates of early Egyptian history. Some say that he ruled from 3969 to 3908 B.C., a reign of sixty years; others believe that he was not born till a thousand years later, or 2900 B.C., and that he was King for but twenty-three years. However, we may be sure that he lived fully five thousand years ago. He was born in Middle Egypt, in a town later called "Khufu's Nurse." How or why he became the King of Egypt, history has not told us. We know little of his reign. His name appears in the religious literature of a later period, and he was the hero of a popular Egyptian story. Upon a sculptured granite block in the temple at Bubastis he is represented as slaying his enemy, and upon the rocks at the mines in Sinai are two of his inscriptions. In the temple at Abydus, however, was found a beautiful small ivory

figure, a quarter of an inch in length, carved with his portrait. It shows a thin face with an expression of unusual strength. His one great monument is his tomb—the Pyramid at Gizeh, the first of the Seven Wonders of the World.

Scarcely had Khufu come to the throne when he began the construction of his tomb which should surpass all others in size and costliness. It should be strong enough to defy the most skilful grave robber, too lasting even for time to destroy. For its site he selected the rocky cliff to the west of the Nile, one hundred feet above the valley, toward the setting of the sun, where it was believed that the spirits of the dead entered the underworld. Preparations for its construction were carefully made; no expense was spared. The resources of the country had long been taxed to support the temples and an army of priests, but religion rested lightly on King Khufu, and perhaps upon his people too. Why should the best fruits of the land be given to the gods whom the King knew to be false? Why should tens of thousands of strong men call themselves priests and live in luxurious idleness? So one of the first acts of King Khufu was to close the temples throughout

all Egypt. The offerings to the gods ceased. The throngs of priests and temple attendants joined the ranks of the workers. The herds of cattle and the flocks of fowls, no longer offered daily to delight the gods or to feed the priests, were food for the workmen. It is said that there were three hundred thousand strong men in Egypt, and that every man, as if he were a slave, was forced to labour for the King. The workmen were divided into three relays of one hundred thousand men each, and each relay was compelled to work for three months, while the men of the other two relays supplied them with food and attended to their usual duties. Their only recompense was their food and clothing, and that was scanty enough. Taskmasters, with whips in hand, stood by to urge them on.

Thus were the workmen obtained, but even with forced labour the cost of the construction of the pyramid was enormous. It has been estimated that even with modern machinery a thousand men would be required to labour for a hundred years if they would duplicate the pyramid. Just what the cost to Khufu was we may never know. Herodotus writes that in his day an inscription engraved



Portrait ot King Khufu



in hieroglyphic characters on the base of the pyramid stated that for the radishes and onions and garlic consumed by the labourers there were expended one thousand and six hundred talents of silver, or about one million dollars. However, long before the pyramid was completed, the King found his treasury empty. Everywhere he sought for more funds, but the resources of the country were exhausted. A story relates that "as a last resort he sent his daughter to the stews with orders to procure him a certain sum," and Hentsen, as his daughter was named, procured it. There is another story that Khufu so grievously oppressed his people that when he died they refused to bury him in his wonderful tomb; that his hated name was never spoken aloud; that even after centuries had passed the people called the great tomb "The Pyramid of Philetion" because a poor shepherd of that name used to graze his sheep about its base.

The material for the construction of the tomb was red granite and limestone. The granite, which was used only for the lining of the walls of the inner chambers, was brought down the Nile from Syene in Upper Egypt, seven hundred miles away. The quarrymen worked in the ancient

fashion, splitting the stone with wooden wedges, and cutting them into the desired shape with copper saws fed by emory powder. The limestone for the great mass of the pyramid was quarried in the hills of Mokattam, several miles away on the opposite side of the Nile, and any traveller to Egypt may visit the quarries, and see the marks of the adze-like implements with which the workmen of Khufu hewed out the soft stones. A vast army of men was employed in the quarries. Another army, labouring upon the hill at Gizeh, where the pyramid was to stand, dug into the rock to the depth of eight inches that the foundation stones might remain securely in place, but a core of living rock was left to project upward in the centre. A long inclined passage was excavated far down into the solid rock, at the bottom of which a chamber was hollowed out. A third army was engaged for ten years, so Herodotus said, in building a causeway up which the stones were to be transported from the river to the Gizeh hill. A fragment of it still exists beneath the little modern village of Kafr.

These laborious preparations were finally completed and the real work of construction began.

At the quarries the stones were loaded upon sledges and drawn on rollers by men to the river. Barges transported them to the opposite shore, and again upon rollers, long lines of men, tugging at the ropes, dragged them to the causeway and up to the place prepared for the pyramid. It is supposed that the construction of some of the Egyptian pyramids began at the time when the king came to the throne, and that each year, as long as he lived, another enclosing layer of stones was added. Thus the pyramid, growing larger and larger, was completed only with his death. But Khufu prophesied for himself a long reign. The size of his pyramid and the location of the mysterious chambers and passageways within were determined from the beginning. The pyramid covered thirteen acres of ground, and was a perfect square, originally measuring 756 feet on each side; it is a walk of more than half a mile about its base, and so accurate were the measurements that modern engineers with modern instruments can detect an error of but a small fraction of an inch. A wide pavement of limestone surrounded the great structure. The four sides approximately face the cardinal points, the north, south, east, and west.

Slowly, layer by layer, the great mass rose, each layer slightly smaller than the one beneath it. It is uncertain just how the stones were raised. Some say that sand was heaped up, forming an inclined plane over which they were dragged, and as the pyramid rose, the inclined plane was built up with it. Pliny says that the inclined plane was of nitre and salt, and that later, when the work was completed, it was melted away with water, or it was of bricks which were torn away. Herodotus, however, tells us that the stones were raised from one stage to another by machines consisting of short planks, perhaps on the lever principle, for the derrick was unknown to the ancients.

Thus the pyramid was reared to the height of 481 feet, or 150 feet higher than St. Paul's Cathedral, or nearly twice as high as the Flatiron Building in New York City. Its sides sloped at an angle of about fifty-one degrees and fifty minutes. Two hundred and three of the courses of the masonry still remain, but according to Pliny the pyramid never came quite to a point, for on the summit was a platform sixteen and one half feet in circuit. What, if anything, stood upon the platform, he does not tell us. The present platform is thirty-



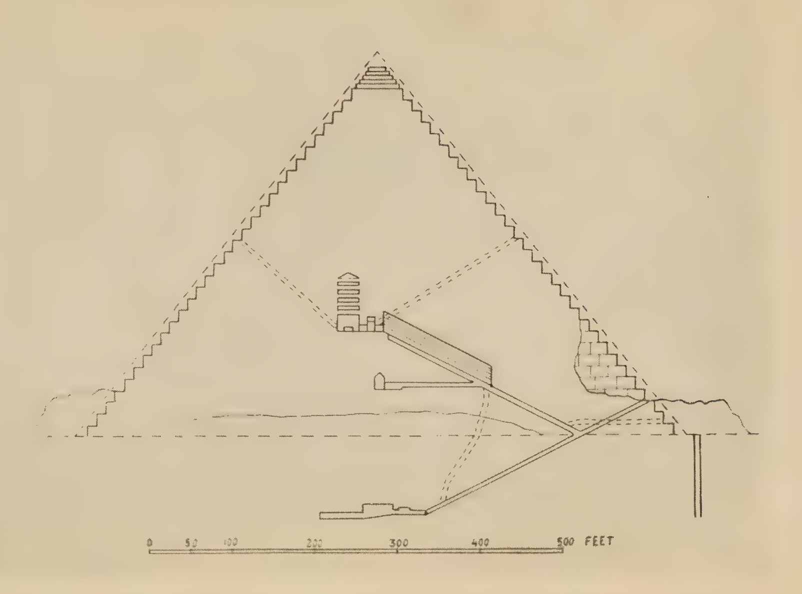
The Tomb of King Khufu



two feet and eight inches square, large enough for a hundred people to stand there comfortably. It is estimated that in the entire pyramid are 2,300,-000 blocks of stone, averaging in weight two and a half tons; the average size is four feet and ten inches in length and two feet and two inches in height; the largest stone visible from the exterior is nine feet long and six and one half feet in height. As we might expect, the stones of the lower courses are larger than those higher up. The mortar used in cementing them was scarcely thicker than a piece of paper, for the joints were fitted together so perfectly that it is impossible to thrust the thinnest knife blade into them. The entire pyramid was once encased with stone polished like glass, and to one standing but a short distance away it must have resembled a single huge stone shining and reflecting the sunlight with dazzling brilliancy. Possibly upon one of the sides was a stairway leading to the summit, for otherwise it would have been impossible to ascend to the platform. Whether or not the casing stones bore hieroglyphic characters, we may never know, yet Herodotus speaks of one inscription at the base, and Arab writers speak of others. It used to be

said that if the casing stone were struck a hard blow, it emitted a peculiar odour, and for that reason the name of "stink stone," or "swine stone," was given to it.

All the ingenuity of the Egyptian architect was employed to conceal the chambers within the pyramid. The entrance at the centre of the north side was carefully concealed by the casing stone, and only when the stone was torn away was it revealed. Imagine that you were an ancient Egyptian and would explore the interior of the pyramid. You climb to the eighteenth course of stones, or forty-seven feet from the base, to a small opening three and a half feet square, leading within. With a guide and a torch you enter. You must bend low, for the passage is but five feet high, and step carefully, for it slopes downward at an angle of over twenty-six degrees. It is a long descent, seemingly interminable, down to the level of the foundation, and then down the shaft through the living rock 317 feet from the entrance. At last, beneath the very centre of the pyramid, you enter a large chamber, but even by the dim light of your torch you may see that the chamber was never completed. King Khufu was not buried



Plan of the Interior of the Pyramid



there. The chamber was only a part of the plan of the wily old King to deceive the future grave robbers. When the robbers would enter the tomb and find it empty, they would imagine that other robbers had been there before them and abandon the search, while the mummy of the King would continue to rest securely in a chamber high above.

You climb back up the passage to the level of the foundation, where the guide will take you to the entrance of another passage which was once carefully concealed. Still bending low, you follow him up through twenty-five courses of stones, and then along the level to the centre of the pyramid. There you reach the queen's chamber, measuring sixteen by eighteen and a half feet, and fourteen feet in height. But the queen was not buried there, for this chamber, too, was constructed to lead the grave robbers astray.

You follow your guide from the queen's chamber along the level passage to the point where the incline begins, and opening before you is a great gallery leading still farther upward. You enter, and here you may stand erect, for the gallery is twenty-eight feet high. Up you climb to the height of 138 feet above the foundation, or to the

fiftieth course of stones, to a small antechamber, and through it to the royal chamber. Here, as in a great cavern, the light of your torch has little effect upon the darkness, for the chamber is thirty-four feet long, seventeen feet wide, and nineteen feet high. The walls are of polished granite, and, if you would climb above the ceiling, you would find several smaller chambers constructed to resist the pressure of the great weight of the stones above. The roofing slabs, weighing about fifty-four tons each, are the largest stones in the pyramid. From the ceiling small holes lead upward for ventilation. It is only with a flashlight that the chamber is sufficiently illuminated that you may appreciate it. Then you admire the polished walls. In a corner you see a stone sarcophagus which must have been built into the pyramid, for it is too large to have been carried through the passage-ways. Perhaps in it the King was buried, but we do not know. Its lid is gone, and it is empty. Perhaps some grave robber plundered it and carried the royal mummy away. Perhaps it is true that when King Khufu died, his people refused to bury him in the great tomb which impoverished them to build. Perhaps, as someone has suggested,



The Royal Chamber



there is still somewhere another secret chamber which neither the early robber nor the modern explorer has been able to discover, where the mummy of Khufu is still reposing in peace, waiting for the return of his soul.

We know nothing of the details of the death and burial of King Khufu. Probably, according to the custom of the time, his body was mummified, and after the final ceremonies had been performed, it was transported across the river in the funeral boat to the pyramid and carried through the long passage to the king's chamber to be placed in the sarcophagus together with vast treasures. The entrance to the chamber was blocked with large granite stones to defy the grave robbers. In the temple near the northern base of the pyramid, the ruins of which may still be seen, priests were stationed to attend to the dead man's needs, and an army of soldiers was quartered there to guard his tomb.

Several ancient descriptions of the pyramid have survived, yet the oldest of them was written after it had been standing more than three thousand years. The Egyptians themselves have told us almost nothing of it; perhaps the memory of the

oppressive King was too odious to inspire them to write. Herodotus has given us the oldest detailed description. Among other things he says:

Cheops succeeded [Rhampsinitus] to the throne, and plunged into all manner of wickedness. He closed the temples, and forbade the Egyptians to offer sacrifices, compelling them instead to labour, one and all, in his service. Some were required to drag blocks of stone down to the Nile from the quarries in the Arabian range of hills; others received the blocks after they had been conveyed in boats across the river, and drew them to the range of hills called the Libyan. A hundred thousand men laboured constantly, and were relieved every three months by a fresh lot. It took ten years' oppression of the people to make the causeway for the conveyance of the stones, a work not much inferior, in my judgment, to the pyramid itself. This causeway is five furlongs in length, ten fathoms wide, and in height, at the highest part, eight fathoms. It is built of polished stone, and is covered with carvings of animals. To make it took ten years, as I said—or rather to make the causeway, the works on the mound where the pyramid stands, and the underground chambers, which Cheops intended as vaults for his own use: these last were built on a sort of island surrounded by water introduced from the Nile by a canal. The pyramid itself was twenty years in building. It is a square, eight hundred feet each way, and the height the same, built

entirely of polished stone, fitted together with the utmost care. The stones of which it is composed are none of them less than thirty feet in length.

The pyramid was built in steps, battlement-wise, as it is called, or, according to others, altar-wise. After laying the stones for the base, they raised the remaining stones to their places by means of machines formed of short wooden planks. The first machine raised them from the ground to the top of the first step. On this there was another machine, which received the stone upon its arrival, and conveyed it to the second step, whence a third machine advanced it still higher. Either they had as many machines as there were steps in the pyramid, or possibly they had but a single machine, which, being easily moved, was transferred from tier to tier as the stone rose—both accounts are given, and therefore I mention both. The upper portion of the pyramid was finished first, then the middle, and finally the part which was lowest and nearest to the ground. There is an inscription in Egyptian characters on the pyramid, which records the quantity of radishes, onions, and garlic consumed by the labourers who constructed it; and I perfectly well remember that the interpreter who read the writing to me said that the money expended in this way was sixteen hundred talents of silver. If this then is a true record, what a vast sum must have been spent on the iron tools used in the work, and on the feeding and clothing of the labourers, considering the length of time the work lasted, which has already been stated, and the additional

time—no small space, I imagine—which must have been occupied by the quarrying of the stones, their conveyance, and the formation of the underground apartments.

This description by Herodotus, as modern explorers have shown, is not always accurate. No canal connected the Nile with the pyramid; his dimensions are exaggerated, and no such stones of the size he mentions were used, unless in the outer casing, which has been torn away, and Herodotus saw none but the casing stones. Pliny, the Roman writer of a later age, merely repeats some of the statements of Herodotus.

When Khufu died, Kaphra, his son, succeeded him to the throne. Following the example of his father, he built the somewhat smaller pyramid at the side of Khufu's tomb, and the rocky projection at the base of the great pyramid was shaped into a mighty sphynx whose head was a portrait of Kaphra. The next King, Menkaura, built another pyramid still smaller, and there the three massive piles have stood to astonish the travellers of every age.

Centuries, even millenniums passed. The little group of pyramids stood, even defying time, but

not the grave robber. With the mummy of every king and noble, treasures of great value were buried, and to find the buried treasures in the tombs the profession of grave robbing arose and flourished. Sometime, we do not know just when, the grave robber attacked the tomb of Khufu. Just how he entered it we do not know; probably he discovered the entrance carefully concealed beneath the casing stone. It seems that he merely descended the long shaft to the chamber far beneath the foundation, and finding it empty, he concluded that others had been there before him, and abandoned the search. It seems that the entrance to the pyramid was known in Roman times, for the early modern explorers found Latin words marked upon the walls of the subterranean chamber.

Other centuries or millenniums passed. The long history of Egypt came to an end. Greece and Rome rose and fell, yet the great pyramid stood as perfect as it was on the day it was completed, still guarding the royal mummy and the treasures in its secret chambers. In Mecca Mohammed was born, and the armies of the Arabs spread over the East. In 639 the Arabian general Amr conquered Egypt. Three years later, in

642, the city of Cairo was built, and the new home of the Arab caliphs grew in a wonderful manner. Building material was required for its mosques and palaces, and the great pyramid, plainly visible from the city, was a quarry with an abundance of stones already cut and polished. So the Arabs wrenched some of the casing stones of Khufu's tomb away; they stripped it of its polished beauty, revealing its rough step-like courses of stones just beneath its surface.

In the year 813, Mamun, the illustrious son of the more illustrious Haroun-er-Rashid of Bagdad, became the caliph of the Arabian world, and in 820 he came to Egypt where he spent much of the latter part of his reign. The pyramid excited the imagination of this scholarly Arab, and he listened attentively to the fantastic tales which the imaginative Arabs poured into his ears. "The Glorious," or "The Mountain of Pharaoh," as they called the pyramid, was built by King Ad, or King Saurad, they said, as a storehouse for his many treasures. Hidden within its chambers were precious stones, weapons that would not rust, glass that would bend and not break, magical stones, and books written by the magicians of old. To

guard the treasures was a nude marble figure standing with lance in hand, and wreathed about his head were serpents to destroy all who approached. Mamun had little faith in the stories, yet he wished to learn the secrets of the interior of the pyramid. It seems that the entrance had been forgotten. Upon the northern side, twenty-four feet from the centre, and low down, he placed his workmen to dig through the stone. For a hundred feet they made their way until it seemed that the pyramid was of solid masonry, and just as they were about to abandon their work as hopeless, they heard a great stone fall in a chamber within. With renewed energy they dug in the direction of the noise they had heard, hurriedly breaking away the stones with fire and vinegar. Finally they came to the point where the passageway turns upward to the queen's chamber. Their blasting and digging had caused the fall of a stone which had been set as a trap to block the approach to the upper chambers. Thus the passageway, so securely hidden that the early grave robbers could not find it, was discovered. Granite stones, too hard for them to break or to cut, stopped the progress of the Arabs, so they worked their way

through the softer stones about them, until at last they stood in the royal chamber before the sarcophagus of King Khufu.

Conflicting are the accounts of the discoveries of Mamun's workmen in the royal chamber. Some say that they found only the empty sarcophagus without its lid, and that when they complained to Mamun that all their labour had been in vain, he secretly buried some gold for them to discover. Thus he rewarded them for their labour. Others say that when Mamun entered the royal chamber, "he saw there a hollow stone in which lay the statue of a man, but the statue enclosed a body whose breastplate of gold was brilliantly set with jewels. A sword of inestimable value lay upon the corpse. At the head, with the light of day, shone a carbuncle as large as an egg." How much of this story is the invention of the Arabs, we may never know, yet one author asserts that in the year 1133 he saw standing in a palace doorway in Cairo the mummy-case which Mamun had taken from the sarcophagus in the royal chamber of the pyramid.

It seems that since the days of Mamun the entrance to the pyramid has remained open to all

who would explore the dark passages within, for the Arabs have little respect for the tombs of strangers. Later builders, among them the great Saladin, plundered the pyramid of others of its casing stones; probably the mosque of Sultan Hassan in Cairo is largely built of them. In 1301 an earthquake cast down all of the remaining casing stones excepting the few which are still beneath the sand at the base. In 1835 Mohammed Ali proposed to tear down the entire pyramid for its stone, but fortunately he discovered that it was cheaper to obtain his building material in a quarry near Cairo. So the pyramid, stripped of its covering, still stands. Had it escaped the hands of the destructive Arabs, it would now be as perfect as when it was completed by the workmen of King Khufu five thousand or more years ago, and if it escapes destruction by future vandals, it will continue to stand perhaps to the end of the world.

The pyramids, unlike many great structures of antiquity, have never been buried; only their history has been forgotten. Most ancient buildings have collapsed and buried themselves amid their own ruins, or the drifting sands have been

heaped above them, or floods have covered them with silt. The Gizeh pyramids, standing conspicuously on their high foundations, have attracted the attention of travellers of all ages, yet it would be difficult to say just when the first scientific efforts were made to explain their origin and purpose. It seems that it was in 1637 when Professor Greaves of Oxford first began their scientific exploration. By 1692 their interior had been investigated, and Maillet described the sarcophagus in the king's chamber as "A narrow space, yet large enough to conteine a most potent and dreadful monarch, being dead, to whom, living, all Egypt was straight and narrow in circuit." In 1763 Davison discovered the first open space above the king's chamber; the others were found by Colonel Vyse in 1837. However, Professor Piazzi Smyth of Edinburgh continued the investigations on a most extensive scale. Since then a score or more of Egyptologists have added to our knowledge of the pyramid until apparently there remain few of its secrets which have not been revealed.

It is not the size of the pyramid alone at which men of all ages have marvelled. Inspired by its

vastness and great age, they have associated with it ideas, some scholarly, others as fantastic as any of the tales related by the Arabs. To enumerate a few of these theories as to how and why the pyramid was built would be amusing; to speak of them all would be tedious.

As the Egyptians were renowned for their knowledge of astronomy it has been argued, by some modern writers, that the pyramid was an observatory for watching the movements of the stars, and that the long passage leading from the exterior to the chamber in the rock far beneath the foundation was a telescope through which the stars were visible at noonday. This great observatory, so it was said, stands in the very centre of the earth; its height is one billionth part of the distance of the sun from the earth; it indicates the number of days in the year; it explains the law of gravitation; it is a standard of weights and measures.

However, in the Orient, where the summers are long and the nights are hot and everybody sleeps on the roof or in the open beneath the sky, there is a familiarity with the stars not general in the Western world. Unless it was among the Chinese, the earliest great astronomers were the Babylo-

nians, who in very early times tabulated the fixed stars, gave them names, and foretold eclipses. They determined the length of the year and divided it into months. Intercourse between the Babylonians and Egyptians was frequent even before the pyramids were built, and it now seems that the Egyptians learned their first lessons in astronomy from the Babylonians. Undoubtedly when King Khufu planned the building of the pyramid he consulted the astrologers, for in his day the distinction between the astrologer and the astronomer was not sharply drawn, and no great project was undertaken without first reading the stars. Perhaps Khufu's astrologers were expert Babylonians, as some have suggested, but of that we may never be sure. The pyramid was constructed near the thirtieth degree of north latitude. Therefore the writers of the past century argued that the Egyptians knew the earth is round and that the pyramid was erected on that degree with design, but to be exact the pyramid stands a mile and a third to the south of that degree. Certainly its location near the thirtieth degree was merely a coincidence; certainly the King selected the site which best suited his fancy, as did the

builders of the score or more of other pyramids which were constructed in Egypt. That the sides of the pyramid faced the cardinal points was certainly not a coincidence, for all the other pyramids were oriented in a similar manner. The Babylonian temple towers, so suggestive of the pyramids, especially of the mastaba type, were built with their corners, not their sides, toward the cardinal points. However, the sides of Khufu's pyramid did not exactly face the north, east, south and west, for in every five yards there is an error of one inch, but that slight error was undoubtedly accidental. Nor is it an accident that the long passageway, inclining at an angle of twenty-six degrees and seventeen minutes, pointed directly to the North Star, which was then Thuban, or *Alpha Draconis*, the brightest star in the constellation of the Dragon, but which now is of a lesser magnitude. Undoubtedly the worship of the heavenly bodies, which permeated the religion of the ancients, was a prominent factor in determining the orientation and construction of the great pyramid, but more than that no man can say.

If Aristotle was right in saying that the pyramid was built merely to find employment for the idle

rich, or, as Pliny says, to keep the captives busy, there were few idle hands during the long reign of King Khufu. Another theorist adds that it was built to please the ladies of old, who requested the sons of God to employ their leisure thus rather than in paying them court.

Modern religious writers have seen in the pyramid things even more marvellous. To them it shows the unity of God and the origin of the Sabbath; it is a prophecy of the coming of Jesus, of His crucifixion, and the passageways symbolize the spear thrust in His side. It is a memorial of the deluge of Noah, and one writer, asserting that the great pyramid soon followed the Tower of Babel, and had the same common origin, asks: "Was it not a copy of the original Tower of Babel? Were not the dimensions of that structure taken from the ark of Noah?" Others, however, do not believe that the pyramid can serve any good purpose, for its "dark caves and mummy depositories are Satan's abodes."

The Zoroastrians see in its shape a tongue of flame, an emblem of the sun and of the sacred fire. According to the Moslems it was three hundred years before the flood when King Saurad dreamed

that the stars fell and the earth collapsed. Again a year later he dreamed that as the stars fell they were transformed to white birds which carried men away. The soothsayers interpreted the terrifying omen. The dream foretold the coming of the deluge. The King therefore commanded the pyramids to be built to preserve the public treasures, the bodies of the kings, the aromatic herbs, and the wisdom of the world which would otherwise be lost. Along with these theories should be included the statement of the renowned Sir John Mandeville, who travelled on long imaginary journeys and recorded the imaginary things he saw.

And now also I shall speak of another thing that is beyond Babylon, above the flood of the Nile, toward the desert between Africa and Egypt; that is to say of the garners of Joseph, that he let make for to keep the grains for the peril of the dear years. And they be made of stone, full well made of mason's craft; of the which two be marvellously great and high, and the tother ne be not so great. And every garner hath a gate for to enter within, a little high from the earth; for the land is wasted and fallen since the garners were made. And within they be all full of serpents. And above the garners without be many scriptures of diverse languages. And some men say, that they

be sepultures of great lords, that were sometime, but that is not true, for all the common rumour and speech is of all the people there, both far and near, that they be the garners of Joseph, and so they find in their scriptures, and in their chronicles. On the other part, if they were sepultures, they should not be void within, ne they should have no gates for to enter within, for ye may well know, that tombs and sepultures be not made of such greatness nor of such highness; wherefore it is not to believe that they be tombs or sepultures.

But the words even of the great Mandeville fail to convince us, and so again we refer to the Father of History, to the truthful Herodotus, who in one brief sentence has told us more than have hosts of later writers, all that modern research has revealed of the purpose of the great pyramid: "It was the tomb of a king."

No journey to Egypt is complete unless it includes a visit to the pyramid and the ascent to its summit. From Cairo you cross the bridge to the western side of the Nile, where a modern trolley car is waiting to take you to Gizeh. In the distance to the south your eye quickly detects the great pyramid outlined against the blue of the Egyptian sky. Higher and higher it seems to rear



Climbing the Pyramid



its summit as you approach. You wade through the deep sand about it, and close to its base you stand looking up its steep high side, doubting if your courage and your strength are equal to the climb. An aged, white-gowned Arab, the guardian of the tomb, reads your thoughts and in broken English asks if you wish guides for the ascent. Three Arabs, strong, nimble fellows, are assigned to you. Two of them seize you by the hands; a third pushes you from behind, and you need them all, for some of the steps are quite four feet high. Soon you stop to rest. Dizziness seizes you as you look down the steep side, and hugging close to the stone lest you fall, you turn your eyes upward. The great stone steps, one above another, seem to continue in endless succession. Again your guides pull and push you on. The rest periods become more frequent. Weary, and with knees trembling, you try to count the courses above you, but they too are finally surmounted, and you step upon the summit. Then your weariness is forgotten as you stand enraptured at the panorama of Lower Egypt at your feet.

Just beneath you the sphynx raises its weather-worn head from the sand. The other pyramids,

mighty structures when seen from below, have lost their majesty. The houses in the little village by the edge of the cliff are tiny boxes. Down in the valley the great broad Nile is a narrow winding silver band; the clumps of date-palms along its borders are patches of green. Here and there are checkered fields of yellow and black and brown, in which the toiling fellahin are of a pigmy race. Beyond is Cairo, a miniature city, whose domes and minarets are vainly struggling upward. To the east, across the valley, the Mokattam hills have lost their height; the desert to the west stretches endlessly away until it is lost on the distant horizon.

There you stand as on a mountain peak, looking, dreaming, conjuring up visions of the long-forgotten past. Finally you reluctantly permit your guides to lead you below. Near the base, before the small opening of the passageway, you stop to gaze into the darkness within. The guides bid you bend low as they lead the way with lighted torches. How long and steep and dark and cool the passage seems. You see the intense darkness in the queen's chamber. You climb up through the great gallery to the king's chamber.



A View from the Summit of the Pyramid



You gaze into the old empty sarcophagus, now marred and broken by the hands of modern tourist vandals. You feel the polished walls now desecrated with those vandals' names. And again at the entrance you stand blinking in the bright Egyptian sunlight.

At the base once more you look upward; now, better than before, you realize that towering like a mountain above you is the largest, the loftiest, the most enduring, one of the oldest tombs of man, and then you really understand why the ancients called that old old tomb the first of the Seven Wonders of the World.



THE SECOND WONDER

The Walls of Babylon



The Walls of Babylon

IN the old city of Damascus you climb to the hump of a tall fleet dromedary. With guides and guards about you, you ride through the covered bazaars crowded with dark-faced Arabs in strange costumes, and along the narrow winding lane which was once the "Street Called Straight." Leaving the city by the eastern gate, and passing a small village or two, you ascend the hill to the plateau, and before you, as far as the eye can reach, stretches the great Arabian Desert. With mingling fear and wonder at the mystery always lying beyond the desert horizon, you tap gently with your heel upon the shoulder of the dromedary to urge her on. At first, paying little heed to you, she hesitates and glances anxiously about the desert as if in search of an enemy. Now and then she reaches down to graze the thorny *argool* along the way. As the taps upon her shoulder are repeated, she stretches out her long neck, and with long strides makes for the eastern horizon; she

realizes that she is bound on the long journey across the desert. Hour after hour she bears you over the hard monotonous plain. The Damascus mosques and their minarets sink beneath the western sky. The desert about you shows no signs of life; only a tall column of whirling sand, rearing its head until it is lost in the blue above, moves majestically along. In the distance your eyes detect a beautiful lake with shores fringed with trees, but soon the phantom lake vanishes, while others, still farther beyond, appear and vanish in rapid succession. Like a great ball of fire the sun sinks in the west. The stars come out one by one and shine brighter than elsewhere as if to light you on your way. Late at night the weary dromedary kneels, and on the ground, close beside her, you lie down to sleep. Again, long before the stars have been scattered by the morning sun, you are on your way. Day after day you travel on, scorched by the heat of noon-day, shivering in the chill winds of the night. Two weeks pass, and at last you stand on the eastern edge of the plateau gazing down upon the great Euphrates winding along the valley beneath. You have crossed the Arabian Desert, the first

stage of the long journey to the walls of Babylon. Here in the valley the water is sweet and the food abundant. For ten days you follow down the river, through little villages and black tent encampments, among scenes of strange Arab life which never lose their charm. Everywhere the valley is dotted with the mounds of buried cities carefully guarding the secrets of the centuries of long ago. At last you see before you a mound rising like a mountain from the level plain. Your journey is at an end. Before you is Babylon, the "Gate of God," as the old name means. About you is all that remains of the second of the Seven Wonders of the World.

Babylon, even in the days of Nebuchadnezzar, was an old, old city. There is a Hebrew tradition that it was the oldest of all cities, but now we know that great empires flourished and passed away before Babylon was built. Old King Sargon I., who may have lived as early as 3800 B.C., seems to have been the first to mention Babylon, and one of his inscriptions seems to say that he built the city and gave it its name. But in those very early days Babylon was little more than a shrine, surrounded with mud huts

and date-palms. It was about 2250 B.C., when the great Hammurabi made it his capital, that it became the chief city of Babylonia. Its history for the next fifteen hundred years or more is obscure. We know the names of its kings, and the records speak of long wars with the Assyrians. In the year 689 B.C., Sinacherib, King of Nineveh, captured Babylon, tore down its palaces and temples and walls, and scraped even the foundations of the city into the river. The place where the old city had stood for three thousand years again became a desert.

Esarhaddon, the son of Sinacherib, was the next King of Nineveh. He rebuilt Babylon that in accordance with the ancient custom he might be crowned in the sacred city. When Esarhaddon died, one of his sons, Samas-sum-yukin, was made King of Babylon. Another son, Assurbanipal, or the great Sardanapalus of the Greeks, became the King of Nineveh. War broke out between the two brothers, and again Babylon was captured. In 626 Assurbanipal died, and in that same year Nabopolassar, the father of the great Nebuchadnezzar, became the King of Babylon. The building of the Babylon so famous in history began

with Nabopolassar. He enlarged the old city, erected temples, and began the construction of its walls. In 606, Nineveh, the old enemy of Babylon, fell, never to rise again. The next year, in 605, Nabopolassar died, and Nebuchadnezzar succeeded him to the throne. He continued the building operations of his father, until Babylon became the greatest city of its age, and surrounded it with walls the like of which no other city has ever seen.

Nebuchadnezzar, or Nebuchadrezzar, as his name should be spelled, was the greatest character in Babylonian history, but about his name so many legends have grown that it is sometimes difficult to learn the facts of his life. Early he married Amuhia, a daughter of the Median king. His military career began while he was still the crown prince, and his father was on the throne. In 605, at the head of the Babylonian army, he defeated the Egyptians in the famous battle of Carchemish, the old Hittite capital, and drove them from Asia. Then Syria and Palestine were added to his future empire. In 597, when he sent his army to Jerusalem, he won the hatred of the Jews by taking Jehoiakin, the King, captive.

Eleven years later, in 586, he destroyed the sacred Hebrew city, transported the Jews to Babylon, and brought the Hebrew kingdom to an end. Centuries afterward, even to this day, Jewish mothers teach their children to hate his name. They tell how he forced the exiles to carry heavy bags of sand across the desert to increase their burdens; how he cast Hebrew lads into a fiery furnace and into the lions' den, and how, in punishment for all his wickedness, he became a calf, and for seven years grazed the grass in the fields about the city. Late in his life, in 567, he invaded Egypt. During all his reign there was little peace in his great mixed turbulent empire.

The walls of the palaces of many of the Assyrian kings were lined with great stone slabs engraved with reliefs and sometimes with the portrait of a king. But in Babylonia stone was difficult to obtain, and sculptures were very rare. Therefore it was useless to hope that Nebuchadnezzar's portrait would be found on his palace walls. However, several decades ago, an Oriental appeared at the Berlin Museum, offering for sale a small cameo engraved with a helmeted head of a Greek type. About the head was an inscription in Greek char-



Nebuchadnezzar's
Cameo



acters saying that the face was that of Nebuchadnezzar. The museum authorities believed that the cameo was one of the many spurious objects which the Eastern forgers were constantly sending to Europe, yet they took an impression of it, and returned it to its owner. Years later, when the archæologists could readily distinguish the false from the true, it was recognized that the cameo was genuine, and that it bore the likeness of the great King. Unfortunately, the little stone seal, perhaps the only one to preserve for us his features, appears to have been lost for ever. Its impression shows the face of a beardless young man, intelligent and refined. The eyes are suggestive of the Semitic; the nose is of the Greek type; the lips are thin, the chin prominent; the neck is that of a strong vigorous man. Such was the appearance of the builder of the walls of Babylon.

Religion and cruelty frequently go hand in hand, and Nebuchadnezzar was exceedingly religious. Though a great warrior, it was not for his military deeds that he was best known. He was fond of restoring the ruined temples of the old Babylonian cities, and most of the records which have come from his time speak chiefly of his deeds of piety.

Read the introduction to any of his inscriptions, of which the following is one, and you will call him vain and proud, but his scribe wrote it in the manner customary for the scribes of those days to write of their royal masters.

> Nebuchadnezzar, King of Babylon, the exalted prince, the favourite of Marduk, the lofty *patesi*, the beloved of Nabu, the arbiter, the possessor of wisdom, who seeks out the path of their divinity, who reverences their lordship; the untiring governor, who ponders daily concerning the maintenance of Esagil and Ezida, and is continually anxious for the shrines of Babylon and Borsippa; the wise, the pious, the maintainer of Esagil and Ezida, the first-born son of Nabopolassar, King of Babylon, am I.

However cruel and religiously intolerant Nebuchadnezzar may have been, he was undoubtedly the greatest builder the world has ever seen. There is scarcely one of the thousands of ruin mounds in Babylonia which does not contain bricks bearing his name. There is scarcely a royal record from his reign which is not chiefly occupied with descriptions of his building operations. He rebuilt many scores of the ancient temples, surrounded many cities with walls, lined the shores of the rivers with

embankments, and spanned the rivers with bridges. Tradition says that to please his foreign wife from the mountainous country he built the famous hanging gardens, but that may be only a tradition. His palace in Babylon was one of the world's largest buildings, but the walls with which he protected his palace and city were the wonder of the whole world. The ancients never tired of describing them. Fortunately in several of his long inscriptions, recently discovered in the Babylonian mounds, Nebuchadnezzar speaks of the building of the walls. In one of them he says:

> I completed Imgur-Bel and Nimitti-Bel, the great walls of Babylon, the mighty city, the city of his exalted power. At the entrance of the great gates I erected strong bulls of bronze, and terrible serpents standing upright. My father did that which no previous king had done. With mortar and bricks he built two moat-walls about the city, and I, with mortar and bricks, built a third great moat-wall, and joined it and united it closely with the moat-walls of my father. I laid its foundation deep to the water level; I raised its summit mountain high. I constructed a moat-wall of burned bricks about the west wall of Babylon.
>
> My father built the moat-wall of the Arachtu canal securely with mortar and bricks. He built well the

quays along the opposite shore of the Euphrates, but he did not finish all his work, but I, his first-born, the beloved of his heart, built the moat-walls of Arachtu with mortar and bricks, and, joining them together with those of my father, made them very solid.

A thing which no king before had ever done:

To the west of Babylon, at a greater distance from the outer wall, I constructed an enclosing wall four thousand cubits in length about the city. I dug its moat to the water level. I walled up its side with mortar and burned bricks, and I united it securely with the moat-walls of my father. Along its edge I built a great wall of mortar and burned bricks mountain high.

Berossus, a priest of the temple of Bel at Babylon, writing about 250 B.C., was living in the city while the walls were still standing, though in a ruinous condition. His brief description of them should not be omitted. He says that Nebuchadnezzar

built three walls round about the inner city, and three others about that which was the outer; and this he did with burnt brick. And after he had walled the city, and adorned its gates, he built another palace before his father's palace; but so that they joined to it: to describe whose vast height and immense riches it would perhaps be too much for me to attempt.



Nebuchadnezzar's Cylinder



Yet as large and lofty as they were, they were completed in fifteen days. He also erected elevated places for walking, of stone; and made it resemble mountains: and built it so that it might be planted with all sorts of trees. He also erected what is called a pensile paradise: because his wife was desirous to have things like her own country; she having been bred up in the palaces of Media.

Of all the ancient descriptions of the famous walls and the city they protected, that of Herodotus is the fullest. Perhaps Herodotus had never been in Babylon; perhaps the tales that travellers told him were exaggerated as travellers' tales are likely to be, yet he at least tried to be accurate. He says:

The city stands on a broad plain, and is an exact square, a hundred and twenty furlongs in length each way, so that the entire circuit is four hundred and eighty furlongs. While such is its size, in magnificence there is no other city that approaches to it. It is surrounded, in the first place, by a broad and deep moat, full of water, behind which rises a wall fifty royal cubits in width, and two hundred in height.

And here I may not omit to tell the use to which the mould dug out of the great moat was turned, nor the manner wherein the wall was wrought. As fast as they dug the moat, the soil which they got from

the cutting was made into bricks, and when a sufficient number were completed they baked the bricks in kilns. Then they set to building, and began by bricking the borders of the moat, after which they proceeded to construct the wall itself, using throughout for their cement hot bitumen, and interposing a layer of wattled reeds at every thirtieth course of the bricks. On the top, along the edges of the wall, they constructed buildings of a single chamber facing one another, leaving between them room for a four-horse chariot to turn. In the circuit of the wall are a hundred gates, all of brass, with brazen lintels and side-posts. The bitumen used in the work was brought to Babylon from Is, a small stream which flows into the Euphrates at the point where the city of the same name stands, eight days' journey from Babylon. Lumps of bitumen are found in great abundance in this river.

The city is divided into two portions by the river which runs through the midst of it. This river is the Euphrates, a broad, deep, swift stream, which rises in Armenia, and empties itself into the Erythræan Sea. The city wall is brought down on both sides to the edge of the stream, thence from the corners of the wall there is carried along each bank of the river a fence of burned bricks. The houses are mostly three and four stories high; the streets all run in straight lines, not only those parallel to the river, but also the cross streets which lead down to the water-side. At the river end of these cross streets are low gates in the fence that skirts the stream, which

are, like the great gates in the outer wall, of brass, and open on the water.

The outer wall is the main defence of the city. There is, however, a second inner wall, of less thickness than the first, but very little inferior to it in strength. The centre of each division of the town is occupied by a fortress. In the one stood the palace of the kings, surrounded by a wall of great strength and size; in the other was the sacred precinct of Jupiter Belus, a square enclosure two furlongs each way, with gates of solid brass; which was also remaining in my time. In the middle of the precinct there was a tower of solid masonry, a furlong in length and breadth, upon which was raised a second tower, and on that a third, and so on up to eight. The ascent to the top is on the outside, by a path which winds round all the towers. When one is about halfway up, one finds a resting place and seats, where persons are wont to sit sometimes on their way to the summit. (Book I., chapters 178–181.)

Other ancient descriptions of the walls have been left us by Ctesias of the fifth century B.C., and by Strabo of the beginning of the Christian era, but they add little to our knowledge. Should we compare these ancient descriptions of the walls, we should find them hopelessly conflicting. However, they teach us that in those early days when most cities were surrounded by enormous walls,

the walls of Babylon were so long and wide and high that all who saw them were amazed. It is only from their ruins that we may hope to obtain accurate information of the strongest fortifications in the ancient world.

In the year 562, after a long reign of forty-three years, Nebuchadnezzar died. He was followed by three kings whose reigns were short, and in 555 Nabonidus, the father of the Biblical Belshazzar, came to the throne. Cyrus, the King of Persia, was rising to power, and after he had defeated the Medes he extended his empire to the Mediterranean and even to Egypt. Perhaps Babylon was so strongly fortified that at first he made no attempt to add it to his empire, but when Nabonidus joined with the King of Egypt and with the wealthy Crœsus of Lydia in an alliance against him, Cyrus decided that Babylon must be taken. In 538 the city fell, and for a time it became the home of the Persian King.

The fall of Babylon with its lofty walls was a most important event in the history of the ancient world. A great empire which had existed for more than three thousand years was brought to an end. The old enemies of Babylon rejoiced.

When the news came to the Hebrews, who were held there in exile, they excitedly rushed about the streets, crying: "Babylon is fallen," and to them came hope of returning to Jerusalem.

But how did the "mighty city" fall? How could Cyrus take Babylon whose walls were strong enough to resist any army? It is a long story. Poets have sung it. Historians have written it. Prophets have preached it. Legends have gathered about it. Every child knows the story of "the writing of the hand on the wall." It was the night that Babylon fell. Belshazzar, the King,—he was really the King's son,—gave a feast to a thousand of his nobles. In the great banquet hall of the palace, when the guests were drinking from the golden cups, and the revelry was at its highest, there suddenly appeared upon the wall an armless hand. High up, where all might see it, the armless hand wrote the King's fate. "Thou art weighed in the balances and art found wanting." "In that night," so the story ends, "Belshazzar, the Chaldean King, was slain."

Less picturesque than this Hebrew legend is the royal record of Babylon, which fortunately was inscribed upon a clay cylinder from the ruins of

the city. It refers to the death of the King's son, possibly to Belshazzar of the Bible story.

In the month Tammuz, when Cyrus fought the troops of Akkad [Babylonia] at Opis on the river Salsallat, he subdued the people, and wherever they collected, he slew them. On the fourteenth day Sippar was taken without a battle. Nabonidus fled. On the sixteenth day the troops of Cyrus entered Babylon without a battle. Nabonidus was taken prisoner in Babylon. On the third of Marchesvan Cyrus entered Babylon and proclaimed peace to all the city. He appointed Gobrias governor of Babylon. On the night of the eleventh day Gobrias killed the son of the King.

Nor does the royal record of Babylon contain the only contemporary account of the fall of the city, for upon a barrel-shaped cylinder of clay bearing a long inscription we have Cyrus's account of his capture of Babylon. Extracts from it are as follows:

Marduk, the great lord, looking with joy on his pious works and upright heart, commanded him [Cyrus] to go forth to his city Babylon, and he went by his side as a friend and companion. His many troops, whose number, like the waters of the river, could not be counted, marched in full armour at his side. Without a skirmish or a battle, he permitted

them to enter Babylon, and, sparing the city, he delivered the King Nabonidus to him. All the people of Babylon prostrated themselves before him, and, kissing his feet, rejoiced in his sovereignty, while happiness shone on their faces.

The inscription continues:

I am Cyrus, king of the world. . . . When I made my gracious entry into Babylon, with exceeding joy I took up my abode in the royal palace. . . . My many troops marched peacefully into Babylon. . . . I gave heed to the needs of Babylon and its cities, and the servitude of the Babylonians, whatever was oppressive, I removed from them. I quieted their sighings and soothed their sorrows.

A much longer account of the capture of Babylon by Cyrus appears in the writings of Herodotus. Though Herodotus wrote nearly a hundred years after Babylon fell, his story seems to bear the stamp of truth. He certainly mentions details which neither Nabonidus nor Cyrus would care to have appear in their royal records. His story is as follows:

Cyrus, with the first approach of the ensuing spring, marched forward against Babylon. The Babylonians, encamped without their walls, awaited his coming. A battle was fought at a short distance from the city,

in which the Babylonians were defeated by the Persian King, whereupon they withdrew within their defences. Here they shut themselves up and made light of his siege, having laid in a store of provision for many years in preparation against this attack; for when they saw Cyrus conquering nation after nation, they were convinced that he would never stop, and their turn would come at last.

Cyrus was now reduced to great perplexity, as time went on and he made no progress against the place. In this distress either someone made this suggestion to him, or he bethought himself of a plan which he proceeded to put in execution. He placed a portion of his army at the point where the river enters the city, and another body at the back of the place where it issues forth, with orders to march into the town by the bed of the stream, as soon as the water became shallow enough: he then himself drew off with the unwarlike portion of his host, and made for the place where Nitocris dug the basin for the river, where he did exactly what she had done formerly: he turned the Euphrates by a canal into the basin, which was then a marsh, on which the river sank to such an extent that the natural bed of the stream became fordable. Hereupon the Persians who had been left for the purpose at Babylon by the river side, entered the stream, which had now sunk so as to reach about midway up a man's thigh, and thus got into the town. Had the Babylonians been apprised of what Cyrus was about, or had they noticed their danger, they would never have allowed the Persians to enter the

city, but would have destroyed them utterly; for they would have made fast all the street gates which gave upon the river, and mounting upon the walls along both sides of the stream, would so have caught the enemy as it were in a trap. But, as it was, the Persians came upon them by surprise and so took the city. Owing to the vast size of the place, the inhabitants of the central parts (as the residents of Babylon declare), long after the outer portions of the town were taken, knew nothing of what had chanced, but as they were engaged in a festival, continued dancing and revelling until they learned the capture but too certainly. Such, then, were the circumstances of the first taking of Babylon. (Book I., chapters 190–191.)

When Cyrus took Babylon, little or no force was employed. Only the King's son, Belshazzar, was killed. The city was spared; the great walls were left standing; the daily sacrifices were continued in the temples, and Cyrus made his home in the royal palace. The people, enjoying the greater freedom which Cyrus permitted them, were contented, and life in Babylon went on about as before. In 529 Cyrus died. During the reigns of the two following Persian kings Babylon was slowly regaining its independence, and in 521 Nebuchadnezzar III., a native Babylonian, was

placed on the throne. Then the Babylonians secretly plotted to throw off the Persian yoke. That same year, when Darius Hystaspes came to the Persian throne, the Babylonians openly rebelled. The following story from Herodotus tells the results:

At last when the time came for rebelling openly they did as follows:—having first set apart their mothers, each man chose besides out of his whole household one woman whomsoever he pleased; these alone were allowed to live, while all the rest were brought to one place and strangled. The women chosen were kept to make bread for the men; while the others were strangled that they might not consume the stores.

When tidings reached Darius of what had happened, he drew together all his power and began the war by marching straight upon Babylon and laying siege to the place. The Babylonians, however, cared not a whit for his siege. Mounting upon the battlements that crowned their walls, they insulted and jeered at Darius and his mighty host. One even shouted to them and said, "Why sit ye there, Persians? Why do ye not go back to your homes? Till mules foal ye will not take our city!" This was said by a Babylonian who thought that a mule would never foal.

Now when a year and seven months had passed, Darius and his army were quite wearied out, finding that they could not anyhow take the city. All strat-

agems and all arts had been used, and yet the King could not prevail—not even when he tried the means by which Cyrus had made himself master of the place. The Babylonians were ever upon the watch, and he found no way of conquering them.

At last, in the twentieth month, a marvellous thing happened to Zopyrus, son of the Megabyzus who was among the seven men that overthrew the Magus. One of his sumpter-mules gave birth to a foal. Zopyrus, when they told him, not thinking that it could be true, went and saw the colt with his own eyes; after which he commanded his servants to tell no one what had come to pass, while he himself pondered the matter. Calling to mind then the words of the Babylonian at the beginning of the siege: "Till mules foal ye shall not take our city," he thought, as he reflected on this speech, that Babylon might now be taken, for it seemed to him that there was a divine providence in the man having used the phrase, and then his mule having foaled.

As soon therefore as he felt within himself that Babylon was fated to be taken, he went to Darius and asked him if he set a very high value on its conquest. When he found that Darius did indeed value it highly, he considered further with himself how he might make the deed his own, and be the man to take Babylon. Noble exploits in Persia are ever highly honoured and bring their authors to greatness. He therefore reviewed all ways of bringing the city under, but found none by which he could hope to prevail, unless he maimed himself and then

went over to the enemy. To do this seeming to him a light matter, he mutilated himself in a way that was utterly without remedy. For he cut off his own nose and ears, and then, clipping his hair close and flogging himself with a scourge, he came in this plight before Darius.

Wrath stirred within the King at the sight of a man of his lofty rank in such a condition; leaping down from his throne he exclaimed aloud and asked Zopyrus who it was that had disfigured him, and what he had done to be so treated. Zopyrus answered, "There is not a man in the world, but thou, O King, that could reduce me to such a plight—no stranger's hands have wrought this work on me, but my own only. I maimed myself because I could not endure that the Assyrians should laugh at the Persians." "Wretched man," said Darius, "thou coverest the foulest deeds with the fairest possible name, when thou sayest thy maiming is to help our siege forward. How will thy disfigurement, thou simpleton, induce the enemy to yield one day sooner? Surely thou hadst gone out of thy mind when thou didst so misuse thyself." "Had I told thee," rejoined the other, "what I was bent on doing, thou wouldst not have suffered it; as it is, I kept my own counsel, and so accomplished my plans. Now, therefore, if there be no failure on thy part, we shall take Babylon. I will desert to the enemy as I am, and when I get into their city I will tell them that it is by thee that I have been thus treated. I think they will believe my words and entrust me with a command of troops. Thou, on

thy part, must wait till the tenth day after I am entered within the town, and then place near to the gates of Semiramis a detachment of thy army, troops for whose loss thou wilt care little, a thousand men. Wait, after that, seven days, and post me another detachment, two thousand strong, at the Nineveh gates; then let twenty days pass, and at the end of that time station near the Chaldæan gates a body of four thousand. Let neither these nor the former troops be armed with any weapons but their swords—those thou mayest leave them. After the twenty days are over, bid thy whole army attack the city on every side, and put me two bodies of Persians, one at the Belian, the other at the Cissian gates; for I expect that, on account of my successes, the Babylonians will entrust everything, even the keys of their gates, to me. Then it will be for me and my Persians to do the rest."

Having left these instructions, Zopyrus fled towards the gates of the town, often looking back, to give himself the air of a deserter. The men upon the towers, whose business it was to keep a lookout, observing him, hastened down, and setting one of the gates slightly ajar, questioned him who he was, and on what errand he had come. He replied that he was Zopyrus, and deserted to them from the Persians. Then the doorkeepers, when they heard this, carried him at once before the Magistrates. Introduced into their assembly, he began to bewail his misfortunes, telling them that Darius had maltreated him in the way they could see, only because he had given

advice that the siege should be raised, since there seemed no hope of taking the city. "And now," he went on to say, "my coming to you, Babylonians, will prove the greatest gain that you could possibly receive, while to Darius and the Persians it will be the severest loss. Verily he by whom I have been so mutilated shall not escape unpunished. And truly all the paths of his counsels are known to me." Thus did Zopyrus speak.

The Babylonians, seeing a Persian of such exalted rank in so grievous a plight, his nose and ears cut off, his body red with marks of scourging and with blood, had no suspicion but that he spoke the truth, and was really come to be their friend and helper. They were ready, therefore, to grant him anything he asked; and on his suing for a command, they entrusted to him a body of troops with the help of which he proceeded to do as he had arranged with Darius. On the tenth day after his flight he led out his detachment, and surrounding the thousand men, whom Darius according to agreement had sent first, he fell upon them and slew them all. Then the Babylonians, seeing that his deeds were as brave as his words, were beyond measure pleased, and set no bounds to their trust. He waited, however, and when the next period agreed on had elapsed, again with a band of picked men he sallied forth, and slaughtered the two thousand. After this second exploit, his praise was in all mouths. Once more, however, he waited till the interval appointed had gone by, and then leading the troops to the place where the four thousand were,

he put them also to the sword. This last victory gave him the finishing stroke to his power and made him all in all with the Babylonians: accordingly they committed to him the command of their whole army, and put the keys of their city into his hands.

Darius now, still keeping to the plan agreed upon, attacked the walls on every side, whereupon Zopyrus played out the remainder of his stratagem. While the Babylonians, crowding to the walls, did their best to resist the Persian assault, he threw open the Cissian and Belian gates, and admitted the enemy. Such of the Babylonians as witnessed the treachery took refuge in the temple of Jupiter Belus; the rest who did not see it kept at their posts, till at last they too learned that they were betrayed.

Thus was Babylon taken for the second time. Darius having become master of the place, destroyed the wall, and tore down all the gates; for Cyrus had done neither the one nor the other when he took Babylon. He then chose out near three thousand of the leading citizens and caused them to be crucified, while he allowed the remainder still to inhabit the city. Further, wishing to prevent the race of the Babylonians from becoming extinct, he provided wives for them in the room of those whom (as I explained before) they strangled to save their stores. These he levied from the nations bordering on Babylonia, who were each required to send so large a number to Babylon, that in all there were collected no fewer than fifty thousand. It is from these women that the Babylonians of our times are sprung.

As for Zopyrus he was considered by Darius to have surpassed, in the greatness of his achievements, all other Persians, whether of former or of later times, except only Cyrus—with whom no person ever yet thought himself worthy to compare. Darius, as the story goes, would often say that "he had rather Zopyrus were unmaimed, than be master of twenty more Babylons." And he honoured Zopyrus greatly; year by year he presented him with all the gifts which are held in most esteem among the Persians; he gave him likewise the government of Babylon for his life, free from tribute, and he also granted him many other favours. (Book III., chapters 150–160.)

How much truth there may be in this interesting tale of Herodotus, we may never know, yet we may be sure that Babylon was taken by Darius only by use of stratagem. Its walls were impregnable. Cyrus had permitted them to stand, and as long as he made Babylon his home, the city was as strongly protected as ever. Darius, who besieged the rebellious city twice, weakened it by destroying some of its walls. During the reign of Xerxes again the city rebelled, and in 484 B.C. he captured it, and completely demolished its defences. Yet Babylon continued to live, for history mentions the names of two of its later rulers. The palace of Nebuchadnezzar was occu-

pied by Alexander the Great, and there on June 13, 323 B.C., he met his death. The city then fell to Seleucus, one of Alexander's generals, who for a time made it his home, but he was a Greek and cared little for things Babylonian. Therefore, to destroy the power of the old capital, he planned to build Seleucia on the Tigris about fifty miles to the east. The priests of the temple of Bel, so a story tells us, learned of his purpose, and when they were consulted as to the most favourable time for beginning the work upon the new city, they intentionally mentioned a most unfavourable hour. The priests' deception was unavailing, and in 275 B.C., the inhabitants of Babylon were transported to Seleucia. Then the world-metropolis, stripped of most of its population, became a mere village. The poor of the surrounding country occupied its dismantled palaces. The Hebrew exiles, whose ancestors Nebuchadnezzar had brought from Jerusalem, settled there, and finally the place was abandoned to the Arabs of the desert. Slowly the few remaining walls fell, and were buried in their own ruins. As the centuries passed the mounds into which the city had turned grew higher and higher with the ruins of the huts later

built upon them, until at last the foundations of the temples and palaces were buried fully a hundred feet beneath the surface. Even the shepherds ceased to graze their sheep there, and the wandering Arabs, fearing the wild beasts and evil spirits which lurk among all old ruins, refused to pitch their tents there. The prophecy of the Hebrew Isaiah was fulfilled:

> Wild beasts of the desert shall lie there; and their houses shall be full of doleful creatures, and owls shall dwell there, and satyrs shall dance there, and the wild beasts of the islands shall cry in their desolate houses, and dragons in their pleasant palaces.

So Babylon was buried and forgotten. It had become, as Dio Cassius said, "Mounds and legends and ruins." But the walls of the old city had not yet served their full purpose. The Sassanian kings of Persia were fond of hunting, and Babylon, then overgrown with trees, was their game preserve. The old walls were restored to a height sufficient to prevent the escape of the animals, and among the ruins the kings enjoyed their favourite sport. St. Jerome said:

I was informed by a certain Elamite brother, who came from those regions, and now leads the life of a monk at Jerusalem, that there is a royal hunting ground at Babylon, and that wild game of every kind is contained within the circuit of its walls.

The statement of St. Jerome is confirmed by the following passage from Zosimus, a Greek writer of the fifth century A.D.:

As the Emperor Julian was marching forward through Babylonia, he passed other unimportant fortresses, and came at last to a walled enclosure, which the natives pointed out as a royal hunting ground. It was a low rampart, enclosing a wide space planted with trees of every sort, in which all kinds of beasts were shut up; they were supplied with food by keepers, and gave the king the opportunity of hunting whenever he felt inclined. When Julian saw this, he caused a large part of the wall to be overthrown, and as the beasts escaped they were shot down by his soldiers.

The walls of Babylon were destined to serve still another purpose. The spread of Mohammedanism caused new cities to be built, and Babylon was the quarry for their building material. The walls of Babylon were transformed into the sacred cities of Kerbela and Nejef. In the eleventh cen-

tury, on the site of the southern part of Babylon, the city of Hillah was built. Hillah might be called a child of Babylon, for it is almost entirely constructed with Nebuchadnezzar's bricks. The walls of the houses are built of them. The court-yards and streets are paved with them, and as you walk about the city the name of Nebuchadnezzar everywhere meets your eye. Many of the ten thousand people living in Hillah still gain their livelihood by digging the bricks from the ruins to sell to the modern builders. The great irrigating dams across the Euphrates are constructed entirely of them. The people of Hillah, too, are a survival of Babylonian times. Some are Arabs of the same tribes which used to roam the desert in Nebuchadnezzar's days. Some are the children of the Hebrew exiles of old. Some, calling themselves Christians, are the descendants of Babylonians, perhaps of Nebuchadnezzar himself. There among the ruins they still live in the same kind of houses, dressing the same, eating the same food as did their ancestors when Nebuchadnezzar built the walls of Babylon.

Among the first of the modern travellers to describe the ruins of Babylon was Anthony Shirley,



A Nebuchadnezzar Brick from Babylon



an Englishman who visited Mesopotamia in 1599. In his quaint way he says:

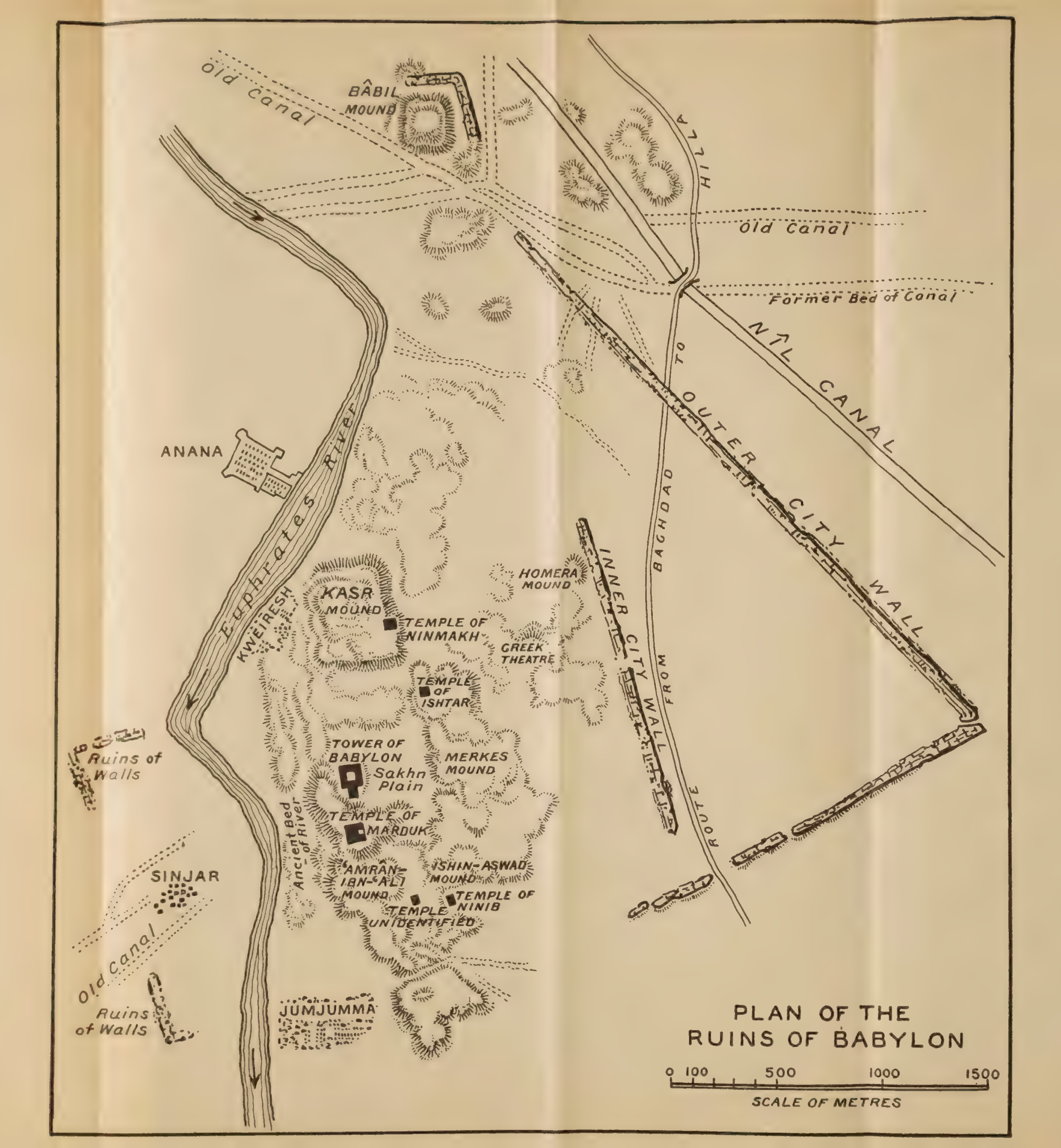
> All the ground on which Babylon was spred is left now desolate; nothing standing in that Peninsula between the Euphrates and the Tigris, but only part, and that a small part, of the greate tower, which God hath suffered to stand (if man may speake so confidently of His greate impenetrable counsels), for an eternal Testimony of His greate work in the confusion of Man's pride, and that Arke of Nebuchadnezzar for as perpetual a memory of his greate idolatry and condigne punishment.

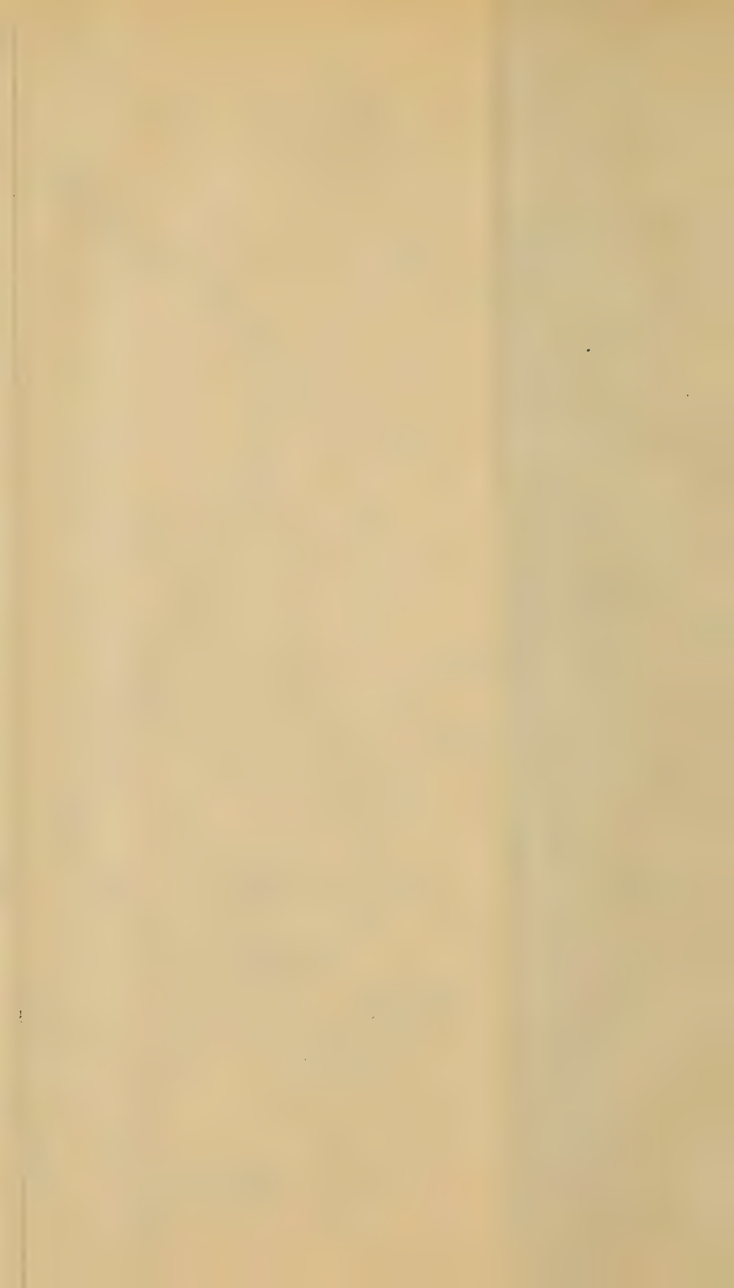
About that same time Pietro della Valle, an Italian, visited Babylon, and digging from the wall an inscribed square brick bearing the name of Nebuchadnezzar, he took it to Rome where it may still be seen. That was the first object taken from Babylon to Europe; it was the beginning of the great collections of Babylonian antiquities in the museums of the Western world.

Among the later visitors to Babylon was the great Niebuhr. In 1812, James Claudius Rich, the British Resident at Bagdad, made the first complete examination of the ruins. Porter, Layard, and Rawlinson followed him, but the real scientific exploration of Babylon and its walls was

begun by the Deutsche Orientgesellschaft, in 1889, and continued till the summer of 1915. For fifteen years Dr. Koldewey and his assistants, with a force of two hundred native workmen, have laboured there winter and summer. The enormous amount of débris which buried the palaces and temples and walls of Nebuchadnezzar's city, in places to the depth of a hundred feet, has been removed, and the surrounding city walls have been traced.

The excavations have shown that Babylon, as the ancients told us, was nearly square. The Euphrates flowed through it, but the greater part of the city was on the eastern shore. The city walls, of which the ancients were so proud, appear here and there like low ridges far out on the plain; other parts of them have disappeared entirely. In the northern part of the enclosure to the east of the river, the large high mound, which resembles a mountain from a distance, still bears the ancient name Babel. Arabs, searching for bricks, have burrowed their way down deep into it, revealing massive walls and arches. The Germans maintain that it is the ruin of the Tower of Babel. Here, it has been suggested, were the


Old Canal
BÂBIL MOUND
HILLA
Old Canal
Former Bed of Canal
NīL CANAL
OUTER CITY WALL
BAGHDAD TO
ANANA
Euphrates River
FROM
INNER CITY WALL
HOMERA MOUND
KASR MOUND
KWEIRESH
TEMPLE OF NINMAKH
GREEK THEATRE
TEMPLE OF ISHTAR
TOWER OF BABYLON
Sakhn Plain
MERKES MOUND
Ruins of Walls
Ancient Bed of River
TEMPLE OF MARDUK
ROUTE
SINJAR
AMRAN-IBN-ALI MOUND
ISHIN-ASWAD MOUND
TEMPLE OF NINIB
TEMPLE UNIDENTIFIED
Old Canal
Ruins of Walls
JUMJUMMA
PLAN OF THE RUINS OF BABYLON
0 100 500 1000 1500
SCALE OF METRES



famous hanging gardens which some ancient authors included among the Seven Wonders of the World. However, it is possible that the hanging gardens existed only in the imagination of the Greek writers, for none of the many building inscriptions from Nebuchadnezzar mentions them. Possibly along the terraces of the walls, or upon the stages of some lofty temple tower, trees and overhanging vines were planted, and thus the travellers' tales arose.

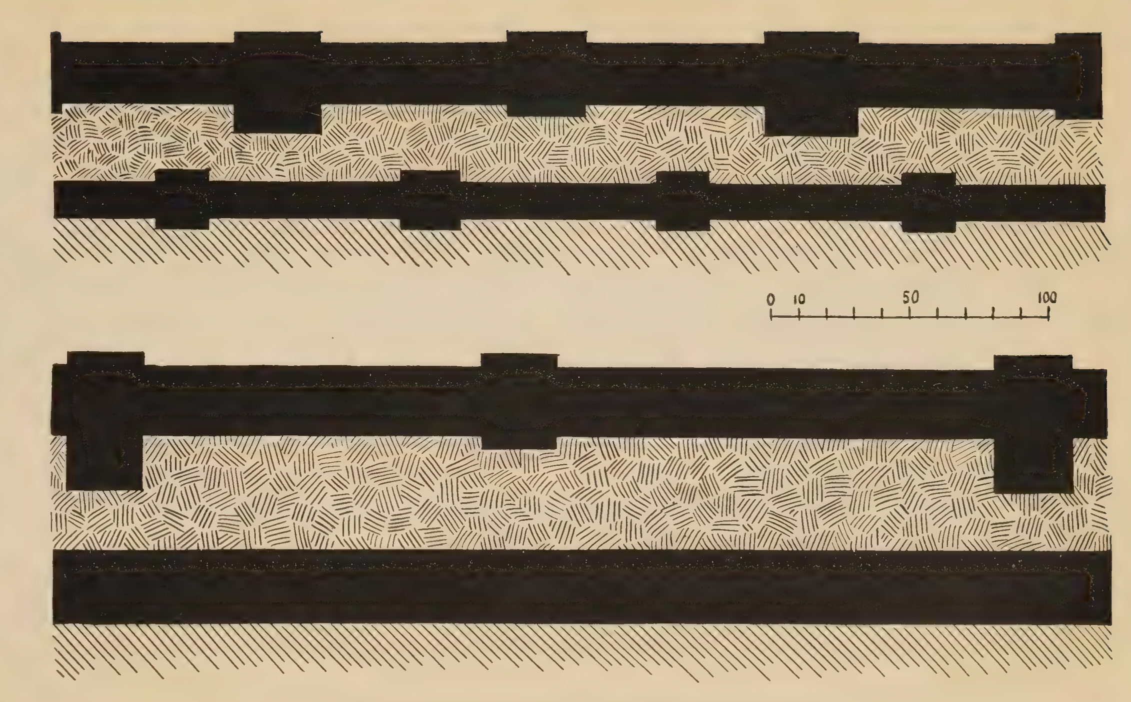
At a distance of about two miles to the south of Babel is the larger and lower mound called the Kasr, or the Fortress, because great masses of masonry used to project from its surface. Deep down in the mound the Germans discovered the palace of Nebuchadnezzar with its hundreds of small chambers and its huge surrounding walls.

The mound still farther south is called Amran, because upon its summit stands the tomb of a Mohammedan saint of that name. There lie the ruins of the famous temple of Esagil, sacred to Marduk. Upon the little mound Jumjuma farther on, an Arab village has long stood.

All of the ancient writers agree in saying that Babylon was surrounded with both inner and outer

walls, and the ruins confirm their statements. Parts of the walls of Nineveh are still standing to the height of one hundred and twenty-five feet, but the walls of Babylon have so long been used to supply bricks to the builders of the neighbouring cities that only their bases remain. In places even the bases have disappeared, and their moats have long been filled with the drifting sand.

The outer wall bore the name of Nimitti-Bel. Its direction was north-east and south-west, forming a triangle with the river. The north-eastern section may now be traced for a distance of less than three miles, and the south-western for more than a mile, but both sections originally reached the river. It seems that the circuit of the outer wall was about eleven miles. The small portions of it which have been excavated suffice to show its construction. The moat, ten feet deep, and of a width no longer known, ran close to its base. The wall was double. Its outer part was about twenty-four feet in thickness, and its foundations, as Nebuchadnezzar said, were carried down to the water level. Its bricks, measuring about thirteen inches square and three inches in thickness, were burned and stamped with the usual short inscrip-



Plan of the Inner and Outer Walls of Babylon



tion: "Nebuchadnezzar, King of Babylon, the restorer of the temples Esagil and Ezida, the first-born son of Nabopolassar, King of Babylon." They were laid in bitumen. The inner part of the wall was constructed of unburned bricks, and at a distance of about thirty-six feet from the outer part. The intervening space, which was filled with dirt probably to the upper inner edge of the outer part, served as an elevated road where several chariots might have been driven abreast. This inner part was about twenty-four feet wide, and at intervals of about one hundred and forty feet it was surmounted with towers. The entire width of the outer defence, not including the moat, was therefore about eighty-two feet; its height was probably more than double its width, but that may never be determined.

The inner wall of Babylon was called Imgur-Bel, and like the outer wall, it was double. Time has dealt even less kindly with it, for it may be traced only for the distance of about a mile along its eastern side. Nebuchadnezzar says that he built it of burned bricks, but only sun-dried bricks laid in mud now appear. Its outer part, about twelve feet in width, was protected with towers

at intervals of sixty-five feet. A space of about twenty-three feet separated it from its inner part, which was about twenty feet in width. It too was surmounted with towers. No traces of its moat have appeared. The entire width of this inner defence was about fifty-five feet; its height is uncertain. To protect the sun-dried bricks of the inner wall from the winter rains there were drains of large burned bricks, some of which bore the following long inscription:

Nebuchadnezzar, King of Babylon, the exalted prince, the protector of Esagil and Ezida, son of Nabopolassar, King of Babylon, am I. Nabopolassar, the father, my begetter, built Imgur-Bel, the great wall of Babylon, but I, the devout petitioner, the worshipper of the gods, built the moat, and made its wall of burned brick and bitumen mountain high. O Marduk, great god, look joyfully upon the precious work of my hands. Be thou my protector. Grant me as a gift a life of distant days.

The outer and inner defences of Babylon were so strong and so high that no enemy could hope to take them, yet the palace of Nebuchadnezzar was protected by a third defence far stronger. Fortunately its walls have suffered less from the

Cross-Section of the Palace Fortifications



hands of the brick hunters, and the German excavators have been able to reconstruct their plan. They may best be described by means of the accompanying diagram representing a cross section. Had the enemy of Babylon succeeded in breaking through the outer and inner defences of the city the royal palace would have still been far from his reach. He would have had to cross a deep moat, to scale a wall of burned bricks about twenty feet in thickness and perhaps three times as high, then a second wall still higher, a third and fourth and a fifth, each stronger and higher than the others, and surmounted with towers, and then finally a sixth wall whose summit reached into the sky as far, perhaps, as the tallest of the modern buildings. Between the several sections were wide spaces where foot soldiers and charioteers might fight. It must have been an imposing sight to one standing without to have seen the walls, one after another, rising higher and higher, like a great terraced, turreted mountain. We do not know their height, for the statements of the ancient writers disagree. Herodotus says that it was three hundred and thirty-five feet; Ctesias mentions three hundred feet; probably they were not far from

the truth. The ruins reach the height of about forty feet.

Nor were the walls about the palace a great mass of dull brick masonry. The Ishtar gateway leading to the palace was encased with beautiful blue glazed bricks, and decorated here and there with large reliefs representing bulls and lions and dragons, designed in colours of white and blue and yellow and black. It seems that the bricks of the reliefs were moulded and glazed separately and so accurately that when built into the wall they fitted perfectly. A modern artist would have difficulty in doing such accurate work. Some of these decorations, the most valuable objects found in the ruins of the great city, still remain in their places on the walls; others have been taken to the Berlin Museum. Nebuchadnezzar speaks of great bronze gates and of images of bronze, but none have been discovered. Probably their metal was far too valuable for the enemy to leave behind.

Should you walk along the shore of the Euphrates at Babylon, you would still see the embankments which Nebuchadnezzar constructed of bricks bearing his name, but the river walls have



The Gateway to Nebuchadnezzar's Palace



disappeared, and the buttresses of the bridges have been torn or washed away. Should you cross the river to search for the western inner wall, you would find but a small fragment of it. The great outer wall seems to have disappeared completely beneath the desert surface.

Such were the walls of Babylon, the strongest, the thickest, the loftiest, the most intricate, perhaps the most beautiful that ever protected a city, walls which no ancient army was ever able to take by storm. It is not strange, then, that they were included among the Seven Wonders of the World, or that the Babylonian soldier stood confidently upon their summit, and jeering at the Persian army encamped below, shouted:

"Why sit ye there, Persians? Why do ye not go back to your homes? Till mules foal ye will not take our city."



Reliefs on the Gateway to Nebuchadnezzar's Palace



THE THIRD WONDER

The Statue of the Olympian Zeus





The Euphrates above Babylon



The Statue of the Olympian Zeus

NOT far from the year 500 B.C., in the Greek city of Athens, lived Charmides and his wife. To this pair of ancient Greeks was born a son to whom the name of Phidias, or Pheidias, was given. Not another word does history tell us of the father and mother of the greatest sculptor the world has ever known.

Of the early years of Phidias's life, history is almost equally silent. It is easy to imagine that when he was a tiny lad, playing in the street, he drew pictures in the sand, or modelled figures of clay to the delight of his playmates. Perhaps that is the reason why his father decided that he should become an artist, or perhaps it was because Charmides himself was an artist, for it was the custom in ancient Greece for a child to follow the trade of his father. However, it is certain that early in his life young Phidias gave promise of such remarkable skill that he was placed in the

charge of the most renowned artists of all Greece. Hegias of Athens, Agelados of Argos, and Polygustus were the teachers who did the most to shape his career. It was Phidias's first ambition to become a painter, but we do not know to what extent that ambition was gratified, for history tells us nothing of his paintings. Perhaps it was because he showed greater promise as a sculptor that his teachers directed him to abandon painting and to confine his efforts to the moulding of clay, or to the shaping of marble into the human form. But Phidias was not satisfied to work with the marble with which other sculptors delighted. The cold stone, even when coloured with the most natural tints, lacked the lifelike expression he would give to his statues. Therefore he sought other materials that he might reach perfection in his art. We know nothing of his experiments or disappointments. The skill of genius is seldom born; it comes only with years of labour and effort and discouragement, or even with failure. We can imagine the long, hard years of preparation which finally led Phidias to success, for already he was well advanced in life before he charmed the cultured world with statues in a new material,

and so lifelike that many who saw them actually believed they were living beings.

Though Phidias worked in stone and bronze, he was the first to employ ivory and gold to represent the human face and form. Chryselephantine is the name given to this form of sculpture. No material so closely resembles the tint and the texture of the flesh as ivory; no metal could better represent the clothing and the hair than enamelled gold. The core or the framework of his statues was of wood, which he overlaid with plates of ivory and gold so skilfully fitted together that the joints were invisible. It seems that he alone was able to employ the ivory and gold to perfection, or perhaps no states but those of ancient Greece have been appreciative enough of art to make large appropriations for the purchase of such costly materials.

It is sad, and strange too, that among all the sculptures inherited from the ancient world there is not a single fragment which we can positively say came from the hand of Phidias. There are many statues and reliefs which may have been shaped by him or under his direction, but there is always a doubt if they are his. It is only from

the writings of the ancients that we know of his chief works; of his less important sculptures no records have survived. They tell us of his bronze group at Delphi, with the statues of Apollo and Athena; of the colossal bronze Athena on the Acropolis at Athens, which was visible to the sailors far out to sea; of the chryselephantine statue of Aphrodite at Elis. One of his statues of Athena was at Pellene, another was at Platæa; but it was in the Parthenon upon the Athenian Acropolis that his chief representation of the goddess stood. It was chryselephantine, and so wonderfully wrought that it shared with the Olympian Zeus in establishing his fame.

At Athens in the year 444 B.C., began the reign of the great Pericles, and the most brilliant period of Greek history and art. Phidias was then fully fifty years of age, and though he had not yet executed the great statues for which he was later renowned, he had acquired a name sufficient to admit him to the circle of distinguished authors and artists and statesmen who frequented the salon of Aspasia, the brilliant wife of Pericles. To adorn Athens with artistic buildings and statues was one of the ambitions of Pericles and Aspasia,



An Ancient Copy of the Athena Parthenos



and it was Phidias whom they selected to carry out their plans. In full charge of beautifying the city, and with the wealth of the Athenian state at his disposal, Phidias gave to Greece much of the glory for which it has ever been famed. The Parthenon was already nearing completion, but the wonderful sculptures of its frieze were inspired by him, and executed by his pupils. He himself, however, devoted his greatest efforts to the statue of Athena which he made for the Parthenon. Two small crude marble copies of it have survived. They represent the standing helmeted goddess with a small Victory in the right hand, and with a large circular shield resting on the ground at her left. The core of the statue was of wood, overlaid with thin plates of ivory and of gold. A copy of the shield, which was richly engraved with a battle scene, was made in ancient times, and fortunately a fragment of it, found upon the Acropolis, shows the wonderfully fine detail of the work.

Many a man upon whom great popular favour has been showered, has found that with the favour have come enemies to deprive him of it. So it was with Pericles who had done so much for Athens,

and Phidias, his favourite, was destined to suffer with him. The success of Phidias had brought him rivals, and enemies too, and when the downfall of Pericles was assured, they plotted to rob the great sculptor of his fame. The government had provided for the statue of Athena a large quantity of gold of which the present value would amount to about $750,000. The enemies of Phidias accused him of stealing a part of the gold and of secreting it for himself, and it seemed that there was no way for him to prove his innocence. The shrewd Pericles, however, had advised Phidias to arrange the gold plates upon the statue so that they might be removed in time of war or of threatened invasion, and, to the amazement of his enemies, Phidias removed the plates and had them weighed. None of the gold was missing, and the charge against him was dismissed.

But the enemies of Phidias were not discouraged. Among the figures in the battle scene engraved upon the shield by the side of the statue of Athena were two which attracted their attention. One was of a man raising a battle-axe, concealing half of his face with his arm. It was a likeness of Pericles. The other was the form of an old bald-



From the Shield of the Athena Parthenos



headed man raising a large stone in the act of hurling it at the enemy. It was a portrait of Phidias. Realism in the religious art of ancient Greece was contrary to custom, and the enemies of Phidias, pretending to be shocked by the appearance of the portraits in so sacred a place, were not slow in accusing him of sacrilege, an act worthy of the greatest punishment. Phidias was arrested and condemned. One tradition says that he was thrown into prison, where he died. Another tradition, perhaps more trustworthy, says that he was banished from Athens. Misfortune is frequently the stepping-stone to greater opportunities, and if the tradition be true, the banishment of Phidias resulted in bringing to him honours far greater than any the Athenians had bestowed upon him, and in giving to the world the wonderful statue of the Olympian Zeus.

In the western part of the Peloponnesus, in the old kingdom of Elis, is a beautiful narrow valley through which the river Alpheus flows. It was called by the ancients "The Fairest Spot in Greece." Between the river and the hill sacred to Chronos, the father of Zeus, was the Greek centre of worship even in prehistoric times. There

later the city of Olympia stood, and there, too, about 1000 B.C., was built the temple of Hera, the oldest temple in all Greece. Its ruins still lie at the base of the sacred hill. Near by was the stadium where the Olympic games had been held long before the year 776 B.C., the date given as the first Olympiad, and there they continued for more than a thousand years. In that same valley the independence of the Greeks continued long after the rest of Greece was ruled by strangers. Olympia was the most sacred, the most popular city in all Greece; perhaps of all the world. About the year 470 B.C., the great temple of Zeus was built in the very centre of Olympia. It stood upon a substructure three steps high. Thirty-six tall granite columns surrounded it, and the three parts of its interior were separated by similar columns. One of its friezes, sculptured by the best Greek artists, and representing the chariot race of Œnomaus and Pelops, contained twenty-one colossal figures. The temple was so closely associated with the Olympic games that it was held in the greatest reverence by the Greeks of all the world. Only to the eastern of the three sections of the interior was the public admitted; in the central section

the victors in the games were crowned with olive wreaths; the western was the holy of holies reserved for the statue of Zeus, where the priests alone might enter. The people were permitted to gaze upon the face of the deity only from a distance as the curtain before it was drawn aside.

It was just as the great temple of Zeus was nearing completion that Phidias fled from Athens, and, accompanied by his cousin, or his brother, Paneinos, the painter, and by some of his pupils, he appeared at Olympia. Though a refugee, he was given a hearty welcome. The holy of holies in the temple was still waiting for a statue of the deity to adorn it, for though sculptors had been found to decorate the temple itself, none had yet been chosen to make an image worthy of the great Zeus. All the world knew of the skill and the fame of Phidias, and at once he was commissioned by the Elians to make the statue. Phidias accepted the commission. Perhaps it was because his cruel persecution by the Athenians was fresh in his mind that he determined that the Olympian statue should surpass in every respect the Athena of the Parthenon. Near the holy grove he built a workshop, and in its centre he erected an altar to the twelve

great gods whom he invoked each morning before he began the work of the day. Gold, silver, ivory, precious stones, and bronze were supplied him in abundance. Carefully he constructed the wooden framework of the statue, strengthened it with iron stays, and saturated it with oil to prevent it from decay. With thin sheets of ivory, made pliable by fire, and carefully joined together, he overlaid the wood to represent the flesh. The eyes were the choicest of gems. The mantle of gold, draped over the left shoulder and arm, and all studded with enamelled flowers and small figures, fell in graceful folds about the legs. On the head was a laurel wreath of gold enamelled green, and the feet were shod with golden sandals. Every part of the huge throne upon which the statue was seated was decorated with the greatest care. Its arms were supported with sphinxes, each holding a youth in its arms. The background of its front was painted blue; even the back was adorned with the three Graces, and on the other sides were mystic scenes representing the struggles of Hercules, the combats of Theseus with the Amazons, and the family of Niobe. The foot-stool rested on lions, and it too was engraved

with the combats of Theseus. On each side of the feet were four small figures of which one was a diadumenos winding a fillet about his head.

At last, after two Olympiads, or eight long years, of labour, the statue was completed to the satisfaction of the great artist. The platform upon which it stood in the holy of holies measured nearly twenty feet in width and thirty in length, and it, too, was covered with metal plates richly engraved with mythological scenes; among them were Aphrodite emerging from the sea, the chariot of Helios rising in the morning, and the car of Selene descending into the deep at night. The roof before the statue was open to the sky to admit the light, according to the custom in the temples of ancient Greece, but above the statue was a covering to protect it from the rains. We do not know just how high the statue was, but the ancient authors say that its head reached the roof forty feet above the foundation. Before it was suspended a beautifully painted curtain to secrete it from the eyes of those who entered the first two chambers of the temple.

The great work of Phidias was completed, and

an inscription was engraved upon it that future generations might know its sculptor. It remained only for the great Zeus to give some sign of approval of the statue made to represent him. A tradition says that in a prayer Phidias asked if his work was acceptable, and immediately in reply a bolt of lightning flashed down through the open roof to the pavement before the statue. Thus Zeus spoke to express his pleasure, and for centuries a beautiful bronze vase stood to mark the place where the lightning had struck. Nor were the people of Olympia, or the throngs of visitors who came to witness the games, less pleased. The fame of Phidias spread. Worshippers came from far and near to see the wonderful statue, and the authors of those days never tired of describing it. One tells us that "Phidias alone has seen the likeness of the gods, or he alone has made them visible." Another said: "No one who has seen Phidias's Zeus can imagine any other semblance of a god." A third added: "Those who enter the temple no longer think that they see ivory from the Indus, or beaten gold from Thrace, but the son of Chronos and Rhea transferred to earth by Phidias." Perhaps Dio Chrysostom, of about

100 A.D., paid the highest tribute to the great sculptor. He said:

> Were any so heavily burdened with cares and afflicted with sorrows that even sweet sleep would not refresh him, standing before the statue, he would, I firmly believe, forget all that was fearful and crushing in life, so wonderfully, hast thou, O Phidias, conceived and completed thy work, such heavenly light and grace is in thy art.

For centuries after the statue was completed it was considered a calamity to die without having seen it, for so lifelike did it seem that the common people thought it to be a real living god. Even in the time of Hadrian a picture of it was stamped on the coins.

Of the life of Phidias, after he completed the statue, history tells us nothing. One tradition—but apparently it is without foundation—says that his troubles at Athens were repeated at Olympia, that he was accused of stealing the gold which the government had furnished him, and was condemned to prison, where he died. Some believe that he completed the Olympian statue even before he made the Athena of the Parthenon, and that his life was ended in an Athenian prison. However,

it seems that in Olympia his name was always honoured, for his descendants, of whom we know next to nothing, were employed by the state to care for the statue.

Fortunately we can follow the history of the statue for nearly a thousand years, until the time when Zeus had become a myth of the ancients. Sixty years after it was completed, cracks appeared in its ivory plates, and Damophon of Messene was employed to repair them. Somewhat later, in some mysterious manner, two of its great gold locks were stolen. In Cæsar's time it was struck by lightning but no serious damage seems to have resulted. The Emperor Caligula conceived the idea of transporting it to Rome, and of perpetuating his glory by substituting his own face for that of the god. The story says that when the workmen laid their hands upon the statue to remove it, a great peal of laughter burst from the lips of Zeus, and they fled in terror; that the ship that was waiting in the nearest harbour to carry it away was struck by lightning and was burned. In 393 A.D., the Olympic games ceased, and the city rapidly declined. In 408, during the reign of Theodosius II., the temple was burned; possibly

the statue was burned with it, or, if it survived, it was broken up and carried away. Another story says that in the year 390 Theodosius I. took it to Constantinople, where it perished in the fire of the year of 416. The same story, however, is related of the Athena of the Parthenon, and in later ages the two statues were frequently confused.

Though the temple had been burned by the plundering Goths, its walls continued to stand and they were converted into a Christian fortress, but a century later an earthquake cast them down. Gradually the waters of the river Alpheus overflowed the ruins, burying them in the silt from the neighbouring hills. In time the city was forgotten, and so it remained during the long centuries of the dark Middle Ages, even to our own day.

In the year 1875 the Germans began the excavations of Olympia and continued their work until the March of 1881. The entire site of the old city was buried to the depth of sixteen feet. Down beneath the silt near the base of the sacred Chronion was the stadium where the famous games were held; near by was the foundation of the old temple of Hera; among the ruins of the houses was the home of Nero when he was a contestant in

the games. In a great confusing mass in the very centre of the ruined city lay the fallen columns and the sculptures of the famous temple. It was a laborious task to uncover them, but one after another those ancient treasures were rescued; the temple foundation was uncovered; the holy of holies where the statue stood was cleared, and though its platform had been taken away, one might clearly see where it had been. In the pavement is a little hole, perhaps the very hole which the temple priests used to point out whenever they told the story of how Zeus spoke to Phidias through the lightning flash.

When now you visit the site of this famous old Greek city you see only a mass of foundation walls nearly hidden among the overgrowing bushes. In the stadium you find the marble slabs which marked the starting point of the Olympic runners. You trace the narrow streets among the homes. You stand amazed, looking at the huge fallen columns of the great temple. You enter the holy of holies where in the early days none but the feet of a priest trod. Upon the little hill overlooking the ruins, close by the hotel, you find a low white building. It is the museum where nearly



The Ruins of Olympia



all that remain of the sculptured treasures are stored. There you see Pelops with Hippodamia at his side. There are the Labours of Hercules, the wonderful Hermes by Praxiteles, and the battle of the Centaurs, but there remains not one small fragment of Phidias's great masterpiece, the statue of Zeus, the wonder of all the ancient world.



THE FOURTH WONDER

The Temple of Diana



The Temple of Diana

THE Greeks used to say that Artemis was the daughter of Zeus and Leto, and the twin sister of Apollo; that she was born on the sixth day of the month in a grove in Ortygia; that she was the goddess of the chase, and so they represented her with a bow and arrows, and with an animal at her side.

The Romans called her Diana. To them she was the goddess of childbirth, and the mothers of the newly-born babes used to offer their clothing to her. In later ages she was pictured as seated on the crescent moon.

Some called her Artemis Brauronia. They thought that she appeared to men only in the form of a bear roaming wild about the fields. Primitive man has always believed that some of the animals are superhuman. That is why the ancient Egyptians used to keep a sacred bull in the temple, or the Romans watched the flights of birds, or the American Indian has his snake

dance. When the bear-goddess was displeased or hungry, she attacked men and killed them. To appease her wrath, a human sacrifice was offered to her, and with the sacrifice she was pleased, for her hunger was satisfied. At the sacrificial ceremony little girls, dressed in bear skins, used to dance about the bear, and then one of them was given to the beast. Once there was a man who had a goat, and he called the goat his daughter. When it came time to sacrifice another girl to the bear-goddess, he offered the goat-daughter in her place. The bear-goddess seemed satisfied, and so human sacrifices ceased. An image of a bear made to represent the goddess has been found upon the Acropolis at Athens.

Some say that the gods we worship are only the creation of our own minds. They are born with us, and they develop as we develop. They possess the forms and the characteristics which we think our gods should possess. Perhaps the goddess Artemis was at first a bear, and when in time she assumed the human form, she became the goddess of the chase, or of agriculture, or of sailors, or of childbirth, or of the moon. So Artemis, or Diana, had many births and many names and many differ-

ent duties to perform in the many lands where she was worshipped.

There were some who said that in very early days a wooden statue of a goddess fell from heaven into a thicket, and that vines, twining about it, held it upright; that men found the goddess standing in the thicket and began to worship her. Some say that the goddess was Artemis, and that the place where she fell was in Greece. Others say that she was Cybele, the Asiatic Mother Goddess of the Earth, who was worshipped especially by the female warriors, the Amazons. The place where she fell was near the coast of Asia Minor, where the River Cayster empties into the sea. Her statue, so later pictures of it inform us, was of wood. Upon the head was a mural headdress to represent the wall of a city. The upper part of the body was entirely covered with breasts, for she was the mother of all the earth. The lower part of her body terminated with a pillar all carved with the figures of animals, or perhaps wrapped about with an embroidered cloth. The thicket where the statue fell was transformed to a grove. In the grove was an aged cedar tree, perhaps more venerated than the others about it, and in its great

hollow trunk the statue was placed. The hollow cedar tree was the first temple of the goddess.

Not far from the grove where the sacred temple tree used to stand, was a little valley lying between the hills Prion and Coressus. Tradition tells us that long before the days of Homer, a migrating band of Amazons settled in the valley. Perhaps those women warriors built a city there, and were later driven away by the Carians and Pelasgians. About 1100 B.C., Androclus, son of Codrus, King of Athens, arrived in the valley with a party of Greeks from Ionia, and then begins the story of the Greek city of Ephesus. The story is long and eventful, for the city, lying by a good harbour at the entrance to Asia Minor, became the centre of trade and wealth and culture, and more than that, it was the great religious centre of all the Orient.

The religious history of the city may have begun with the Amazons who worshipped the Oriental Cybele, for when the Greeks came to Ephesus she was the local goddess of the place. They seem to have associated her or confused her with their own Artemis or Diana, and so the great Diana of Ephesus was the composite offspring of both

Greek and Oriental deities. How long the goddess was contented to live in the hollow cedar tree, history does not tell us. Perhaps the old tree was blown down by the wind, or perhaps, as the fame of the goddess increased, she desired a more stately residence, for in the eighth century B.C. a platform of greenish stone was built about the place where the tree had stood, and upon the platform her statue and an altar were placed. A stone wall was then built about the platform, but the goddess still stood beneath the open sky. This was her second temple, but her first one of stone, and to it the worshippers brought gifts of metal and ivory and bone and crystal and paste and glass and clay. Some of these early gifts to the goddess are now carefully preserved in the British Museum.

The fame of the goddess spread, for she seemed to bring prosperity to all who worshipped her. By the year 650 she had outgrown her little shrine, and it was enlarged and placed at a higher level, but her statue continued to stand in the very same place. This was her third temple.

Diana had scarcely entered her new abode when it happened that hordes of the wild Cimmerians

overran the country and burned the temple, yet they spared Ephesus. The people said that Diana had saved the city, and therefore at once a fourth temple, larger and on a higher foundation, was built to the protecting goddess. It was of a Greek type, surrounded with columns, but we know little of its details. Chersiphon and his son Metagenes of Cnossus were its architects.

The increasing fame of the goddess brought larger and larger numbers of pilgrims from afar to worship at her shrine, and they carried back to their homes wonderful tales of her power. Her gifts increased, and even the new temple was scarcely large enough to contain them. A still greater temple was required, and it was decided that all the people should have a part in building it. From 560 to 546, Crœsus, the wealthiest man of the ancient world, was the King of Lydia, and Ephesus, then a mighty city, fell into his hands. Crœsus had been told that his riches and power were so great that they might arouse even the jealousy of the gods, and to prevent such a calamity he contributed liberally to the building fund of the new temple. History does not tell us the amount of his gift, but it was so large that he was

regarded as its builder. Thus the fifth temple of Diana came into existence. It stood in the same place where all of the earlier temples had stood, but at a higher level; it was so large that its cella alone covered all the space which they had occupied, yet the statue still marked the place where the old cedar tree had stood. Pæonius of Ephesus and Demetrius, a priest of the temple, were its architects. Its stone was the white marble from the hills seven miles away. Its main foundation was 360 feet in length and 180 in width; its entire ground plan covered an area of 80,000 square feet. Its more than a hundred marble columns surrounding the cella in double rows were of the best Ionic order; but we do not know their height. Its walls bore sculptures by the best artists. We are told that one hundred and twenty years passed before it was completed, but at last, sometime between 430 and 420 B.C., it was dedicated. Then there was rejoicing in Ephesus; people from all the world gathered to witness the games and to hear the orators and the poets. Timotheus won the prize for his lyric ode. The smoke from the temple altar now rose in greater volume than ever; gifts came in far greater abundance, and Diana was

acknowledged to be the chief goddess of all the world.

A story is told that in the year 395 an attempt was made to burn the temple; perhaps it was partly burned and restored again. However, later there lived at Ephesus a Greek named Herostratus who desired to perform some deed which would cause his name to be handed down through all the ages, and so on a night in October, 356, the very night when Alexander the Great was born, he burned the temple to the ground. Herostratus won the eternal fame he coveted, but he is known only for this one act—the greatest crime of which he could conceive. According to Hegesias, a Greek writer of about 300, Herostratus chose a convenient time for burning the temple. That night the goddess Diana was absent; she had gone to Macedonia to assist at the birth of Alexander.

The crime of Herostratus was so enormous that his name was erased from the public records, yet indirectly it resulted in great good to the goddess, to the city, and to all the world. A new temple arose, larger, loftier, richer, more magnificent; it was the great temple of Diana, which was the wonder of the world. Work on the new temple



Reconstruction of the Temple of Diana



was begun about the year 350, and though Pliny says that a hundred and twenty years were required for its construction, it seems to have been completed in a third of that time. In 334, when Alexander came to Ephesus, he offered to defray the cost of its completion if he might be permitted to dedicate it in his own name to the goddess. The Ephesians, unwilling that such great honour should be given to the Macedonian, and yet fearing to displease him, replied: "It is not fitting that one god should build a temple to another god." Though the aid of Alexander was refused, Dinocrates, his favourite architect, who planned the city of Alexandria, supervised its construction. Pliny, however, says that Chersiphron was the architect. The new temple stood on the site of all the others. Its foundation, enlarged to 418 feet in length and 239 in width, was built up with great blocks of stone seven feet above the older temples, and ten stone steps led to its surface. Upon the foundation was the temple platform nine and a half feet higher; it was reached by fourteen steps. The temple itself was 342 feet long and 164 feet in width. One hundred and twenty-seven great stone columns, six feet in diameter at the base

and more than sixty feet tall, supported the roof. The columns were about seventeen feet apart, and a row of eight of them extended along the front. Thirty-six of the columns, some square and others round, were donated by the kings of different countries, and were sculptured in relief from the base to the height of twenty feet. Above the sculptures they were fluted. The great cella was partly open to the sky, and the roof about the opening was covered with large white marble tiles. The friezes were sculptured by the greatest artists, but unfortunately we know little of them. Before the temple entrance stood the great image of the goddess, probably a large reproduction of the wooden statue which long before fell from heaven.

Such was the outer appearance of the temple. In most respects it resembled the Greek temples of that age. It was not alone its size, nor its sculptured decorations, which gave it a place among the seven wonders. The elaborate service, the wealth, the varied business interests it controlled, the wide influence it exerted, all united in adding to its fame.

Though several of the ancient writers have written of the temple, Pliny, who saw it only after



A Drum from a Column of the Temple of Diana



it had been standing four hundred years, has given us one of the fullest accounts. He says:

The most wonderful monument of Grecian influence, and one that merits our genuine admiration, is the temple of the Diana of Ephesus, which took one hundred and twenty years in building, a work in which all Asia joined. A marshy soil was selected for its site, in order that it might not suffer from earthquakes, or the chasms which they produce. On the other hand, again, that the foundations of so vast a pile might not have to rest upon a loose and shifting bed, layers of trodden charcoal were placed beneath, with fleeces covered with wool upon the top of them. The entire length of the temple is 425 feet, and the breadth 225. The columns are 127 in number and sixty feet in height, each of them presented by different kings. Thirty-six of these columns are carved, and one of them by the hands of Scopas. Chersiphron was the architect who presided over the work.

The great marvel of this building is, how such ponderous architraves could possibly have been raised to so great a height. This, however, the architect effected by means of bags filled with sand, which he piled up upon an inclined plain until they reached beyond the capitals of the columns; then as he gradually emptied the lower bags, the architraves insensibly settled in the places assigned them. But the greatest difficulty of all was found in laying the lintel which he placed over the entrance doors. It was an enor-

mous mass of stone, and by no possibility could it be brought to lie level upon the jambs which formed its bed; in consequence of which, the architect was driven to such a state of anxiety and desperation as to commit suicide. Wearied and quite worn out with such thoughts as these, during the night, they say, he beheld in a dream the goddess in honour of whom the temple was being erected; who exhorted him to live on, for that she herself had placed the stone in its proper position. And such, in fact, next morning, was found to be the case, the stone apparently having come to the proper level by dint of its own weight. The other decorations of this work would suffice to fill many volumes, but they do not tend in any way to illustrate the works of nature. (Pliny, xxxvi., 21.)

Diana of Ephesus, as we have seen, was partly Asiatic and partly European in origin; her temple service was Asiatic rather than Greek. Neither the priests not the priestesses were permitted to marry. At the head of the temple staff was an official who bore the Persian title of Megabyzus; the Greeks called him the Neocorus. Just how he attained his office, we do not know, but probably he was appointed by the state. A little ivory statue found in the ruins of the temple a few years ago is supposed to represent him. The priests were graded according to the services they ren-

dered. It was the duty of the Theologi to give instruction in the religious rites and sacred legends. The Hymnodi composed the temple songs and conducted the musical ceremonies. Responsive hymns always formed a prominent part in the temple ritual, and during the processions when the statues of the goddess were taken about the city, the marching was accompanied with weird chants. The Hieroi, who must have been by far the largest class of the priests, performed the manual work about the temple.

As the goddess Diana was connected at least in legend with the Amazons, priestesses naturally played a prominent part in her worship. They were known as the Parthenoi, or the Unwedded, or more popularly as the Melissæ, or Bees, perhaps because of their great activity in the temple service. That is perhaps why the form of a bee is stamped upon the coins of the city. They also were divided into classes, but it is impossible to say just what their duties were.

Indirectly connected with the temple staff was a host of silversmiths who manufactured small images of the temple and of the goddess, sometimes of silver but more frequently of clay, to sell to the

visiting pilgrims. The pilgrims purchased them to present as votive offerings to the goddess, or sometimes to take as souvenirs to their distant homes. Thus a part of the temple income was derived.

The temple ceremonies were also Oriental in their character. The best of the offerings of animals and grains and fruits, as in the temples of old Babylonia, were consumed by the priests rather than burned upon the altar to the goddess. As in old Babylonia, too, once each year the statues of the goddess were taken about the city. The procession took place on the twenty-fifth of May, the day when the statue of the goddess is said to have fallen from heaven. There were hosts of statues, great and small, of wood and clay and stone and silver and gold. We are told of one man, Caius Vibius Salutaris, who presented the temple with many images of gold and silver weighing several pounds each, and with money equivalent to four thousand dollars invested at nine per cent. interest. The income of this endowment, which amounted to $360 a year, a very large sum for those days, was intended for the care of the images, and for their transportation in the pro-

cession. The temple stood some over a mile from the city, but connected with it by a great highway thirty-five feet in width, and paved with marble blocks. Damianus, a wealthy Roman, built over this Via Sacra an arched stone *stoa* to protect the priests and the statues from the rain and the sun. The procession, with long lines of priests marching to the accompaniment of the weird music, and perhaps with the dancing priestesses, and with chariots laden with the statues, entered the city by the Magnesian gate. Before the great theatre it halted. The images were carried to the stage where the audience, which might have numbered more than fifty thousand, could see them. When the ceremonies, whatever they were, were completed, the procession passed through the principal streets and out by the Coressian gate and back to the temple.

Pilgrims flocked to Ephesus from all parts of the world, from Europe and Asia and Africa, vying with each other in the costliness of their gifts. There were treasures of gold and silver and ivory and rich embroideries. Sculptors and artists devoted their best works to the goddess, and among the objects most highly treasured were the statues

of the Amazons which Phidias made in competition with other artists, and a painting of Alexander by Apelles. In time the temple became a great museum, perhaps the first great museum in the world's history.

Naturally the usual and the more acceptable gifts were of money, and the wealth of the temple became prodigious. To care for the money and to invest it properly, there were expert financiers in the priesthood. Vast business enterprises were carried on; large tracts of land were purchased and cultivated; mines were developed; estates were administered; fisheries were controlled; the temple ships traded with all the world. The temple loaned money to those who required it, or borrowed it from those who had it to loan, and deposited for safe keeping treasures of every kind. At one time the temple controlled the greater part of the wealth of the Orient. It was to the ancient world all that the Bank of England is to the modern world, and more.

The temple was also an asylum, a place of refuge for the fugitive or the criminal. Perhaps in the early times the right of asylum was confined to the temple itself, and most temples were and are still



The Magnesian Gate



places of refuge. Later the boundaries of the asylum were extended. When the great Mithridates possessed the city he sought popularity by enlarging them to the distance of a bow shot from the temple. Still later, when Mark Antony extended them to include a part of the city more than a mile away, the city became a haunt for criminals of all sorts. Augustus confined the sacred space to within a quarter of a mile of the temple, and surrounded it with a wall, traces of which may still be seen. Strabo speaks of the asylum in the following words:

> The temple has the right of sanctuary to the present day, but the boundaries of the sanctuary have varied at different times. Alexander extended them to a stadium [600 feet]. Mithridates shot an arrow from the roof and is said to have shot it a little beyond a stadium. Antony doubled the distance and thus included within the right of sanctuary a certain portion of the city; but this ordinance put the city at the mercy of the malefactors, so that Cæsar Augustus cancelled it.

During all the centuries that the temple stood, Asia Minor was the scene of many wars. Kings of the neighbouring states fought for it, won it, and lost it again. Its cities were frequently

destroyed, and their people massacred, but Ephesus and the temple almost alone escaped. It was the belief among the common people that Diana protected the city, and that may well be true for she was revered even by the enemies of the state. When the wealthy Crœsus was besieging Ephesus, and the city seemed about to fall, the priests stretched a rope from the temple about it to indicate that it was sacred ground. Crœsus abandoned the siege, and became a faithful follower of the goddess. Ephesus next fell to the kings of Persia, and though Xerxes destroyed other shrines, he showed great honour to Diana by leaving his own children in her charge for safety. With the defeat of the Persians Ephesus became tributary to Athens, and then again it was Persian. Alexander was the next to possess it. Lysimachus built its great walls and changed its name to Arsinoë in honour of his wife. Eumenes, King of Pergamum, restored its old name. Attalus took it next, and then his descendant, Attalus III., bequeathed it to Rome. Under the Romans Ephesus was the chief city of the Roman Province of Asia, and the richest in all the Empire. Once, during the time of Mithridates, when the city

revolted from Rome, its Roman citizens, even those that had taken refuge in the temple, were massacred. Sulla won the city back to Rome and punished it for unfaithfulness. Antony once besieged it, and with the beautiful Cleopatra lived there in great luxury.

In spite of wars and changes in government, Ephesus flourished. The temple steadily grew in wealth and in influence. Christianity came to the world, and in 57 A.D., St. Paul, on one of his missionary journeys, came there. He was a brave man to attack the goddess in her own home, and as eloquent as brave, for the people listened eagerly to him. The pilgrims, who had come from afar to worship the goddess, were drawn to the new religion, and instead of spending their money for the little shrines of the temple, they returned home taking the new religion with them. The story is told in the Biblical book of the Acts, chapter xix:

> And it came to pass, that . . . Paul . . . came to Ephesus. . . . And he went into the synagogue and spake boldly for the space of three months, disputing and persuading the things concerning the kingdom of God. . . . And many that believed came, and confessed, and shewed their deeds. Many

of them also which used curious arts, brought their books together and burned them before all men: and they counted the price of them, and found it fifty thousand pieces of silver. . . . And the same time there arose no small stir about that way. For a certain man named Demetrius, a silversmith, which made silver shrines for Diana, brought no small gain unto the craftsmen; whom he called together with the workmen of like occupation, and said, Sirs, ye know that by this craft we have our wealth. Moreover ye see and hear, that not alone at Ephesus, but almost throughout all Asia, this Paul hath persuaded and turned away much people, saying that they be no gods, which are made with hands: So that not only that this our craft is in danger to be set at nought; but also that the temple of the great goddess Diana should be despised, and her magnificence should be destroyed, whom all Asia and the world worshippeth. And when they heard these things they were full of wrath, and cried out, saying, Great is Diana of the Ephesians. And the whole city was filled with confusion: and having caught Gaius and Aristarchus, men of Macedonia, Paul's companions in travel, they rushed with one accord into the theatre. . . . And when the town clerk had appeased the people, he said, Ye men of Ephesus, what man is there that knoweth not how that the city of the Ephesians is a worshipper of the great goddess Diana, and of the image which fell down from Jupiter? Seeing then that these things cannot be spoken against, ye ought to be quiet, and to do nothing rashly. For ye have brought hither these men, which are neither robbers

of churches, nor yet blasphemers of your goddess, . . . For we are in danger to be called in question for this day's uproar, there being no cause whereby we may give an account of this concourse.

As far as we know this was the first serious attack upon Diana; and St. Paul was so successful that he established a Christian church at Ephesus. For a time the Christians were imprisoned and martyred, yet Christianity spread. The trade of the silversmiths began to fall away. The old books of sorcery were burned. The very existence of Diana was threatened, and yet the struggle between Christianity and paganism continued for more than two centuries. In 262 A.D., the invading Goths destroyed the city and burned the temple. It was another severe blow to Diana. A smaller temple which was built on the old site was destroyed by the zealous Christians, and the followers of the goddess were persecuted. Finally the Roman Emperor commanded that all pagan temples be closed. The goddess Diana, who had ruled supreme for fifteen hundred years, was dead, and few were left to mourn her.

Slowly the little that was left of Ephesus fell to ruins. The stones of the temple and of the

fallen public buildings were used in the construction of another Christian church, whose ruins on the hill near where the temple had stood may still be seen. A tradition, though probably it is not true, says that some of the great columns supporting the dome of St. Sophia in Constantinople were taken from the temple. The deserted harbour of the city was soon choked up, and where the ships from all the world used to anchor, the bulrushes grew. The river, overflowing its banks, transformed the temple site into a malarial swamp. In the eleventh century the ruined city was a haunt for the Greek pirates who plied their trade along the coast. Two centuries later, when the Turks came, a prosperous town was built near the site of the buried temple, and the Christian church, already ancient, was in its turn a quarry for the building material of an imposing mosque. In 1365, when the Knights of St. John of Jerusalem took Ephesus, it again became Christian, but in 1402 Tamerlane restored it to the Turks in whose hands it has remained till this day. The ruins have now long been overgrown with shrubbery, and their only inhabitants are a few miserable peasants who live by catching the grey mullet

in the old harbour, or by raising tobacco on the few fertile spots. Everywhere there is a confusion of ruins, but the site of the temple was long ago completely forgotten, and as one writer has said: "Of all the great temples of antiquity, the Artemesium, or temple of Diana, was the only one whose site has disappeared without a trace."

If you would visit the ruins of Ephesus, from Smyrna, you would travel by the Aidin Railroad to the south to the little village of Ayassoluk. The name of the village, a corruption of the Greek meaning "The Holy Word of God," recalls the days when St. Paul established Christianity there. It is a small squalid place, where idle Turks loiter about the coffee house, and the storks roam unmolested along the street. The great columns of an ancient aqueduct, now overgrown with vines, tower above the little huts. The ruins of the old church on the hill have nearly disappeared, and the great mosque, the stones of whose walls were originally from the temple, and then from the church, has long been an imposing ruin. A mile from the village is the great Magnesian gate, and beyond it, in the valley between the hills, are ruins and shrubbery and waste, and silence everywhere.

In the year 1863 Mr. J. T. Wood, representing the British Museum, obtained permission from the Turkish Government to search for the lost temple of Diana. There were ruins in abundance —city gates and marble streets and theatres and churches and baths, but not a trace of the temple. For six long years he searched. Finally there appeared an inscription on the theatre wall saying that the sacred processions came from the temple to the city by the Magnesian gate, and returned by the Coressian gate. He identified the gates, and from the Magnesian gate he followed the marble paving of the sacred way, now buried deep beneath the fields. It led him to a swamp by the old mosque, and there on December 29, 1869, twenty feet beneath the surface of the swamp, he found all that was left of the temple. Only its foundation and a few scattered sculptured stones and inscriptions remained. The work of excavation was continued till 1874 when the funds were exhausted. For fifteen years from 1894 the Austrian Archæological Society conducted excavations in the city with valuable results. In the marble paving blocks of the streets were the deep ruts worn by the chariot wheels. Pedestals for statues



The Sacred Way in Ephesus



lined the sacred way. The great agora with its surrounding colonnade, the baths of Constantine, which earlier travellers had mistaken for the ruins of the temple, the so-called Prison of St. Paul, and Tomb of St. Luke, and a score of wonderful marble buildings, all told of the glory and the might of the great Diana. Of more importance to our story were the excavations by Hogarth of the British Museum. For six months during the year 1904, he laboured at the old temple site. Down beneath the foundation of the temple which Wood had discovered, he found foundation stones of the Crœsus temple, and beneath them were traces of three smaller temples of still earlier days. Thus the ruins repeat the long-lost story of the temple, which, because it was great and beautiful and rich; because it was a place of refuge, a museum, a bank; because it was revered more widely than any other, was the wonder of the world.





The Site of the Temple of Diana



THE FIFTH WONDER

The Tomb of King Mausolus



The Tomb of King Mausolus

IN the southern part of Asia Minor, running parallel with the Mediterranean coast, is an almost impassable mountain range. The foothills between the mountains and the sea, practically separated from the rest of the world, were the old kingdom of Caria; now that ancient kingdom is a little corner of the Turkish vilayet of Aidin. Deep bays, cutting far into the land, were the safe retreats for the pirates of old when they used to haunt the coast to prey upon the passing merchant ships, and the mountains, then covered with huge pines, supplied them with an abundance of material for their boats. Tradition says that in the very early days, when the Tyrian galleys roamed over the seas, a party of Phœnicians, attracted by the safe harbours, settled there, but probably others had occupied the land before them. Some believe that the Asiatic Lelages, or Carians as they were later called, were the first to inhabit the place, and that their first city stood

on the little island of Zephyria at the head of the Gulf of Cos, where you may now see the castle of St. Peter. However, Minos, the renowned King of Crete, compelled the Carian pirates to move to the mainland. There they built the city of Mylasa; there they won renown for their skill in making weapons, and there they became a nation so great that Homer honoured them by calling them the allies of the illustrious Priam of Troy.

At the head of the Gulf of Cos, close by the little island where the pirate village stood, and where the little Turkish town of Budrum now stands, was the city of Halicarnassus. Some claim that Halicarnassus was of divine origin; that it was founded by Anthes, the son of the god Poseidon. Others believe that migrating Greeks settled in the land, and mingled with the Carians. It was at Halicarnassus that the illustrious historian Herodotus was born, and where he lived until he was exiled.

Long lines of independent kings lived and ruled at Mylasa until finally, in 387 B.C., the Persian power spread over the land. Hecatomnus, the Carian King, then became the Persian satrap or ruler, and the country was still practically free.

Mausolus, or Maussollus, if you wish to write his name that way, and Artemisia his sister, were two of the children of Hecatomnus. History tells us that they were both endowed with remarkable beauty and wisdom, and so devoted were they to each other that when they had grown to a marriageable age they became husband and wife. It was the custom in the royal family of Caria for brothers and sisters to marry, just as now a European crown prince is required to take a wife from some royal family. Few marriages have been happier than that of this brother and sister. It is said that when Mausolus died the heart-broken Artemisia cremated the body of her husband, and mixed the ashes with the wine which she drank. The tomb she erected for him was one of the Seven Wonders of the World.

It was in the year 377 B.C. that Hecatomnus died, and that Mausolus and his sister-wife came to the throne as the representatives of the Persian king. But Mausolus chafed under the Persian yoke, rebelled, and threw it off. Then he invaded Lycia and Ionia and several of the islands and added them to his kingdom, and never in all its history did Caria enjoy such prosperity. The

old city of Mylasa no longer seemed worthy of being the home of the King, so Mausolus removed his residence to Halicarnassus, which he sought to make the most beautiful city in the whole world.

With the plea that the old city walls of Halicarnassus should be enlarged and made worthy of the capital of the kingdom, Mausolus extorted vast sums of money from the people of Mylasa. However, it was rumoured about that he used the money for beautifying the city, or that he secreted it for himself, and that later it was used for the building of his tomb. In the most sightly spot in the city, commanding a view of the entire walls and of the harbour, he built his palace. He protected the harbour, and with a mole he formed a secret inner harbour by the palace where his fleet of a hundred ships might safely anchor invisible to the enemy. To increase the population of the city, he compelled the people of Mylasa and of several other towns to abandon their homes and settle there. He constructed temples and theatres, and soon Halicarnassus became a centre of culture. He struck his own silver coins which bore the head of Apollo on one side and of Zeus on the other. For all of this still more money was re-

quired, and to obtain it Mausolus taxed his people heavily. Discontent arose, yet when he died in the year 353 B.C., only the good of him was remembered. It was forgotten that he was extortionate and unscrupulous.

It was a wonderful funeral with which the broken-hearted Artemisia honoured her husband. According to the custom there were funeral games for many days. Renowned poets and orators read their poems and delivered their orations. Theodektes, the illustrious poet who was the pupil of Plato and the friend of Aristotle, won the offered prize, perhaps because he was the most enthusiastic in eulogizing the dead King; but his poem no longer survives.

When Artemisia succeeded Mausolus to the throne, her one great thought was to honour her brother-husband. Though the beautiful city was a monument worthy of any man, Artemisia planned to build for him a tomb which would outshine in splendour all other buildings, and perpetuate his name to the end of time. And she succeeded. It was the custom of the kings of many ancient lands to build their own tombs, and it is supposed that Mausolus may have planned his tomb and

began its construction, but that we may never know. The site selected for it was at the head of the gulf, upon an elevated spot in the centre of the city, between the temple of Mars and the market-place. The most renowned architects, Satyros and Pythis, were engaged. The sculptors were Scopas, Leochares, Bryaxis, and Timotheus, all rivals for the first place in the world of art. Pythis, the architect, sculptured the famous chariot group surmounting the tomb.

But Artemisia was not left in peace to mourn her husband and to build his tomb. The hand of Mausolus had rested heavily upon the people he had subdued, and now they sought their freedom, but the woman who was capable of building the most beautiful of all tombs, was no less skilful as a ruler. The inhabitants of Rhodes ridiculed the idea that a woman could rule Caria, and confident of an easy victory over her, sent their fleet against Halicarnassus. Artemisia, learning of their plans, secreted her ships in the inner harbour and stationed her soldiers on the walls. As the fleet approached, the soldiers, in accordance with her instructions, seemed to surrender, and the Rhodians, abandoning their ships, went ashore to

take possession of the city. No sooner had they landed than Artemisia sailed from the secret harbour, and captured the entire Rhodian fleet, while the soldiers, rushing from the walls down into the city, surrounded the enemy in the market-place and cut them to pieces. Artemisia, however, was not contented with the capture of the hostile fleet. Immediately she manned the Rhodian ships with her own seamen, decked them out gaily with laurel, and sailed for Rhodes. When she appeared off the island, the people thought their fleet was returning home in triumph and joyfully welcomed it into the harbour. Soon they saw their mistake, for the leaders were quickly put to death, and the island remained subject to Artemisia. In a public square of Rhodes was erected to the victorious Queen one of the many large bronze statues for which the city was famous until the larger Colossus of Rhodes outshone them all. There it stood till Artemisia died and Rhodes became free, when the statue, so hated by the people, was removed.

In the meantime the construction of the tomb progressed, but Queen Artemisia was not destined to see it completed. For two years she mourned

her brother-husband, and then, in 351 B.C., she was buried with him.

With the death of Artemisia work upon the tomb was not permitted to cease. Each of the four sculptors had been given one of its sides to adorn, and each eagerly sought to surpass the others in the excellency of his workmanship. When the funds were exhausted, the work became a labour of love; fame would be the reward. It is not known in just what year the tomb was completed, yet it was completed, and all who saw it marvelled.

The ancient writers were fond of describing the mausoleum. Travellers of the Middle Ages have told how it perished, and recent excavations at Halicarnassus have brought to light its ruins. One of the tritest of the ancient descriptions of it was when Anaxagoras saw it and exclaimed: "How much money is changed into stone." The best of the early descriptions is that of Pliny, who lived after it had already been standing four centuries. Naming the artists employed in its construction, he says:

Artemisia made this sepulchre for her husband, Mausolus, Prince of Caria, who died in the second



Reconstruction of the Mausoleum



year of the hundred and seventh Olympiad. It was chiefly due to the artists whom I have already named that the work was reckoned among the seven wonders. On the south and north it extends 163 feet, being shorter in the fronts; its entire circumference is 411 feet; it is raised in height 25 cubits; round it are thirty-six columns.

The part surrounding the tomb was called the Pteron. The sculptures on the east side were by Scopas, on the north by Bryaxis, on the south by Timotheus, on the west by Leochares.

Before the artists terminated their labours, Queen Artemisia died, but they did not cease from their work till it was completely finished, regarding it as a monument of their own fame and of art. To this day it is a matter of dispute which of the four masterpieces is the finest. With these sculptors a fifth artist was associated. For, above the Pteron, a pyramid equalled the lower height, contracting by twenty-four steps to a point like that of a meta. On the summit is a marble chariot with four horses, the work of Pythis. The addition of this made the height of the entire work 140 feet.

The ancient accounts of the tomb are so confusing and contradictory that modern scholars, who have attempted to reconstruct it from them, have had little success. Could Queen Artemisia awake to see the steeple of St. George's Church in Bloomsbury, England, modelled, so the archi-

tect thought, after the famous tomb, she would probably fail to see a resemblance. The excavations at Halicarnassus, however, have at last given us more accurate knowledge, and the Temple of the Scottish Rite in Washington is a more accurate reconstruction.

To prepare the foundation of the tomb the architects levelled the native rock, digging it away upon one side to the depth of fifteen feet. The foundation, laid upon this rock, measured 127 feet from east to west, and 108 from north to south. It was therefore not quite square. The greenish stone of its foundation was quarried in the vicinity, and shaped into blocks averaging four feet square and one foot in thickness. They were held together with iron clamps. Through the foundation wall led a passageway, lined with marble slabs, to the sepulchral chamber within.

Upon the foundation stood the rectangular podium or basement of the tomb, measuring 114 by 92 feet. It also was built of green stone encased with marble. Groups of statuary stood about its base, and the bareness of the walls was relieved with sculptured slabs. At the four corners were stone platforms with equestrian groups.



From the Frieze of the Mausoleum



Upon the podium stood the pteron, or the enclosure of the cella, like a square stage surrounded with thirty-six fluted columns of the Ionic order, twenty-nine feet high, and placed ten feet apart. Between the columns stood marble statues, and above them, extending about the four sides of the building, was the wonderful frieze with which the greatest artists of the ancient world sought to perpetuate their fame. On one side was sculptured the combat between the Greeks and the Amazons. On another was the battle of the Centaurs. The subjects of the sculptures on the other two sides are no longer certain. Above the frieze was the cornice of a simple echinus pattern, and at each of its corners, and at intervals along its sides, were sculptured lions' heads.

Next came the pyramid, measuring at the base of its longer side 105 feet and 5 inches. Its twenty-four steps were built of marble slabs, each four feet long and fifteen inches in thickness. Grooves with tongues to fit them, and iron clamps held them in place.

Surmounting the pyramid was a platform about twenty-five and a half feet long and five feet less in width, to support the famous chariot group

which was the crowning glory of the tomb. Four huge horses twelve feet in length were attached to the chariot with harnesses of bronze. The wheels of the chariot were seven feet and seven inches in diameter, and the alternate spaces between the six spokes were closed for greater strength. Within the chariot stood the large statue of King Mausolus, and with him, either in the chariot, or on the pedestal at his side, was the statue of a female attendant, possibly his devoted wife Artemisia. Fully one fourth of the chariot group has been recovered, including the statue of Mausolus, and this is fortunate, for it is one of the best portrait statues from the ancient world. It stands nine feet and ten inches in height; the statue of his female attendant is fourteen inches shorter. If now you will look upon the portrait of King Mausolus, you will see a square massive face, with deep-set eyes, heavy brows, and a firm mouth. A thick short beard covers the lower part of the face, and heavy hair hangs down nearly to the shoulders. The face and the form suggest a large, strong, active man. Unfortunately the face of the female figure has been broken away.

Should a structure of marble similar to the

Statue of Artemisia (?)

Statue of Mausolus



mausoleum be erected at the present time, as the Temple of the Scottish Rite in Washington, it would probably remain one great mass of shining white. The beauty of the stone would suffice. But the ancient sculptors were not so easily satisfied. The parts of the statues representing flesh were tinted. The eyes and hair were of their natural colour. The clothing was of brilliant hues. The lions and horses were painted. The ground for the sculptures and ornaments was blue, and the mouldings were red. Even the white marble of the walls, which was left unpainted, was toned down with a coat of varnish or of wax to relieve it of its dazzling glare.

Such was the appearance of the exterior of the mausoleum. It was not its magnitude which won it admiration, for it covered but half the area of the Parthenon, yet it was about twice as high. The graceful outlines, the harmonious colouring, the profusion of statues and reliefs artistically placed, the perfection of the minutest details, and especially the best work by the most famous artists, brought it fame.

Our knowledge of the interior is meagre. In the basement was the sepulchral chamber to which

the body of the king was taken through a narrow passageway. A huge stone was arranged to fall into place after the burial, completely blocking up the entrance, and leaving the body with the treasures beyond the reach of the grave robber. We no longer know if Artemisia was placed to rest in the chamber with her husband, or in the larger space above.

From the floor above the sepulchral chamber the view upward revealed tier after tier of columns and galleries, one above the other to the apex of the pyramid. How the stairways were arranged, or how the interior was lighted, we may only conjecture. However, here and there in the semi-darkness sculptured reliefs stood boldly out, and statues of men guarded the tomb below. There was such an effect of lightness about the mausoleum that the report persistently floated about the ancient world that it was suspended in the air.

When Artemisia died, she was succeeded to the throne by her brother Idrieus. It was probably during his reign that the tomb was completed. Idrieus married his sister Ada, who, after her husband's death, asked Alexander the Great if she might adopt him as her son. Ada was ban-



The Scottish Rite Temple in Washington



ished by another brother. With the rise of Alexander the dynasty of Hecatomnus came to an end, and Caria became a part of his empire. Changes followed rapidly. Menander, Antigonus, Lysimachus, Ptolemy, Antiochus Epiphanes, and the Romans in turn ruled the land, but the tomb continued in all its beauty. Travellers from afar came to see it. Lucian in his *Dialogues of the Dead* makes Mausolus to say:

> Besides that personal superiority, I am beautiful, tall of stature, and of so robust a constitution as enabled me to sustain all the hardships and fatigues of war; but to be brief, the principal point is, I have a prodigious monument raised over me at Halicarnassus, which, for magnitude and beauty, has not its equal in the whole world. It is decorated with the most exquisite figures of men and horses, all carried to such a degree of perfection, and in such exceedingly fine marbles, as you will not easily find even in a temple.

Lucian later makes Diogenes humorously to remark in reply:

> As to your monument and the costly marble of which it is built, the inhabitants of Halicarnassus may certainly have reason to show it to strangers, and to think much of themselves for possessing so

costly a work within their walls; but, my handsome friend, I do not see what sort of enjoyment you should have in it. You should only say that you have a heavier load than the rest of us, since you have such an enormous heap of stones lying upon you.

By the beginning of the Christian era Halicarnassus was nearly deserted, and the mausoleum, still standing, was unguarded. Cicero, the orator, accused Verres of carrying away its statues. Once in the time of Quintus an effort was made to restore the city; later the Jews sought to build a temple there, but the old Carian capital slowly declined, and in time it was almost forgotten. Only the tomb remained. In the fourth Christian century Gregory remarked that it had not been plundered. Constantine of the tenth century says that it was still standing, and even in the twelfth century a traveller writes that "It was and is a wonder."

Sometime before the year 1402 a severe earthquake shook the mausoleum. The chariot group at the top was hurled from the pedestal far to the north, and buried in the dirt. With it fell the statue of Mausolus, breaking it into more than fifty pieces; the statue of his attendant fared even

worse. The pyramid collapsed, and the beautiful frieze fell amid the ruins and was broken.

In 1402 the Knights of St. John of Jerusalem took Halicarnassus, which then bore the name of Mecy, and the German knight, Henry Schlegelholt, built the fortress of St. Peter, which is still standing. The stones for the castle were taken from the mausoleum; its sculptured marble slabs were converted to lime for cement, yet the artistic nature of the knight prompted him to build some of the reliefs into the castle wall. The building and the repairs of the castle extended over a century, yet the base of the mausoleum with the sepulchral chamber still remained.

At Lyons, France, in 1581 there were published the works of Guichard, containing the following story which appears to be true. It describes the final disappearance of the parts of the mausoleum which had escaped the plundering knights.

In the year 1542, when Sultan Solyman was preparing to attack Rhodes, the Grand Master, knowing the importance of the castle of St. Peter, and being aware that the Turks would seize it easily at the first assault, sent some knights thither to repair the fortress and make all due preparations to resist the enemy.

Among the number of those sent was the Commander de la Tourette, a Lyonese knight, who was afterwards present at the taking of Rhodes, and came to France where he related what I am now about to narrate to M. d'Alechamps, a person sufficiently known by his learned writings, and whose name I mention here only for the purpose of publishing my authority for so singular a story.

When the knights had arrived at Mecy they at once commenced fortifying the castle, and, looking about for stones wherewith to make lime, found no more suitable or more easily got at than certain steps of white marble, raised in the form of a terrace in the middle of a level field near the port which had formerly been the Great Place of Halicarnassus. They therefore pulled down and took away these marble steps, and, finding the stone good, proceeded, after having destroyed the little masonry remaining above ground, to dig down, in the hope of finding more.

In this attempt they had great success, for in a short time they perceived that the deeper they went, the more the structure was enlarged at the base, supplying them not only with stone for making lime, but also for building.

After four or five days, having laid bare a great space one afternoon, they saw an opening as into a cellar. Taking a candle, they let themselves down through this opening, and found that it led into a fine large square apartment, ornamented all round with columns of marble, with their bases, capitals, architrave, frieze, and cornices, engraved and sculptured

in half relief. The space between the columns was lined with slabs and marbles of different colours, ornamented with mouldings and sculptures, in harmony with the rest of the work, and inserted in the white ground of the walls, where battle scenes were represented sculptured in relief.

Having at first admired these works, and entertained their fancy with the singularity of the sculpture, they pulled it to pieces, and broke up the whole of it, applying it to the same purposes as the rest.

Besides this apartment, they found afterwards a very low door, which led into another apartment, serving as an antechamber, where was a sepulchre, with its vase and helmet, of white marble, very beautiful, and of marvellous lustre. This sepulchre, for want of time, they did not open, the retreat having been sounded.

The day after, when they returned, they found the tomb opened, and the earth all round strewn with fragments of cloth of gold, and spangles of the same metal, which made them suppose that the pirates, who hovered along the coast, having some inkling of what had been discovered, had visited the place during the night, and had removed the lid of the sepulchre. It is supposed that they discovered in it much treasure.

It was thus that the magnificent tomb, which ranked among the seven wonders of the world, after having escaped the fury of the Barbarians, and remained standing for the space of 2247 years, was discovered and destroyed to repair the castle of St. Peter, by the Knights of Rhodes, who immediately

after this were driven completely out of Asia by the Turks.

Thus the tomb of Mausolus perished. The sepulchral chamber was plundered by pirates, the sarcophagus opened, and its treasures carried away. Soon even the site of the mausoleum was forgotten. In 1665, when Thevenot, a French traveller, visited the little Turkish village of Budrum, as Halicarnassus was then and is still called, he saw the marble reliefs which the knights had built into the castle wall. In 1846 Viscount Stratford de Redcliffe, the British Ambassador to Constantinople, with the permission of the Turkish Government, sent thirteen of the sculptures to the British Museum, where they were pointed out as all that remained of the famous tomb.

It was in 1855 that steps were taken to excavate the ruins of Halicarnassus. Mr. Charles T. Newton, formerly of the British Museum, and then British Vice-Consul at the island of Mitylene, found in the walls of the castle of St. Peter several large lions of Pentelic marble. He believed that once they had adorned the mausoleum. The next year, after expending six weeks in exploring the

ruins, he requested the British Government to support him in their excavation. Provided with the ship *Gorgon* and its crew of one hundred and fifty men, and with the sum of ten thousand dollars, he obtained a *firman* from the Turkish Government, and reached Budrum in November.

On the first day of January, 1857, he began the work of excavation. Guided by the statement of the ancient author, Vitruvius, that the mausoleum stood at the head of the harbour between the market-place and the temple of Mars, he sought the site of the tomb. The land was owned by private individuals, and houses had been erected upon it. These he purchased. In the walls of the houses he found fragments of the famous frieze. In the ground beneath them were parts of other sculptured slabs, and of statues and lions. He came to a stairway twenty-nine feet wide, cut from the solid rock, and followed down its twelve steps to the bottom; the lowest step was buried beneath twenty feet of dirt. There upon the native rock the base of the foundation wall was still in place. There he found alabaster jars, one of which bore the name of the Persian King Xerxes in four different languages. There were terra-

cotta figurines, the bones of oxen, a small ivory elephant half an inch in length, an iron dagger, and a marble casket with its sides sculptured in low relief. There too was the huge square stone of ten thousand pounds weight, which had closed the entrance to the sepulchral chamber. A little to the north, buried in the dirt, were the fragments of the chariot group with the statues of Mausolus and his companion, just where they had fallen. The fragments of twenty lions, and of many of the statues and steps of the pyramid were recovered. The fortress of St. Peter was again carefully explored, and still other fragments were found. High up in the walls was the torso of one of the horses of the chariot group, punctured with bullets; the modern Turks of Budrum had used it as a target.

Piece by piece all of the fragments that had escaped the hands of the destructive knights were gathered and sent to the British Museum. Each piece was carefully studied to learn just what place it had occupied, and at last, after more than half a century, the architect may draw a fairly accurate picture of the mausoleum. So if you would see all that is left of this wonder of the

world, it would be of little purpose to visit the site of the old city of Halicarnassus. In the castle of St. Peter you would see the great blocks of green stone of its foundation. In the field at the head of the harbour, among the squalid Turkish homes, you would stand upon the spot where it stood, but it is in the British Museum that you will find the best of all that has survived of the wonderful monument—the broken silent witnesses of the wonderful love of Queen Artemisia for her brother-husband Mausolus.



THE SIXTH WONDER

The Colossus of Rhodes



The Colossus of Rhodes

SCATTERED from the eastern coast of Greece across the Ægean Sea to Asia Minor are scores of beautiful islands. Upon the map they seem like stepping-stones for the giants of old to pass dry shod from shore to shore. The mainland of Greece, even in her most prosperous days, was always small; her families were large, and the few fruitful valleys deep among the barren hills have never yielded more than a scant supply of food. So the Greeks have always been a roving people, seeking new homes wherever they might better their conditions. In the early days the beautiful islands of the Ægean, so near to their shores, were their favourite settling places. There they built cities, established island kingdoms, and waged wars. In times of peace they sent their merchant fleets throughout the world; they cultivated the arts and literature, and the cities of the island kingdoms were scarcely less brilliant than was Athens in her brightest days.

The most easterly of the Ægean islands is Rhodes, lying twelve miles from the Asia Minor shore, just where Cape Alypo juts into the sea. It is the largest of the Sporades group, yet its length from north-east to south-west is but forty-five miles; its width is half its length; its area of 424 square miles is less than half the size of our own little Rhode Island. A mountain range, Atairo, the Atabyris of the ancients, whose highest peaks reach 4560 feet above the sea, runs lengthwise through the island, and from their summits Crete is visible on the southern horizon. From the central range spurs reach out in every direction as if they were arms bathing in the sea. Thus along the coast large, beautiful, amphitheatre-like harbours are formed. The mountainsides were once clothed with forests of mighty trees, but their Turkish owners have cut them down for making charcoal. Figs, oranges, pomegranates, and grapes, favoured by the gentle climate, have always grown there abundantly.

History has not yet told us the name of the first people who lived upon the island, or when or whence they came, yet we know that Rhodes was inhabited centuries before Homer sang of Troy.

Tradition says that the Telchines, renowned for their skill as metal workers, were the first to settle there. The earliest Rhodian inhabitants of whom history speaks were the Greek colonists from Argos. There they built cities; they sailed their ships on all the seas; their prosperity attracted others from the mainland until the little island could support no more, and in their turn they sent out colonists to settle in Asia Minor, in Italy, and even in distant Spain.

At the extreme north-eastern end of the island is a large harbour embraced by two of the arms projecting from the mountains. There small bands of colonists had built their homes, but it was not till 408 B.C. that the harbour was selected as the site of the city of Rhodes. Hippodamus, an architect of Miletus, was selected to lay out its plan, and the new capital of the thriving little kingdom soon rivalled the older cities of Greece. Its streets were straight and wide, its lofty walls were strong enough to resist the most powerful armies. To the Sun-god Helios, or Apollo, the deity of the island, a magnificent temple was erected, and in the public squares stood fully a hundred colossal statues of gods and of men. A

long pier was built forming two harbours where there had been one before. At the entrance to the smaller harbour to the east, rocks were heaped up so that but a single ship might enter at a time, but the larger harbour to the west could accommodate her many merchant fleets.

To increase the population of the new city, the inhabitants of Lindus, Ialysus, and Camorus, and other towns of the island, were brought there, and the fame of Rhodes aroused the covetousness of her neighbours. Its independence was brief. Successively it became subject to Sparta and to Athens, and to Artemisia of Halicarnassus, who built the wonderful tomb to her husband Mausolus. In 340 B.C., it was captured by the Persians; eight years later it fell into the hands of Alexander the Great, but when Alexander died, it recovered its freedom.

Again at peace, Rhodes prospered. Once more its merchant ships covered the seas. Alexandria at that time was the great market where the grains of India and Africa were stored, but it was in Rhodian ships that they were distributed throughout the world. Thus was formed a strong bond between the little island and the great Egyptian city.

When Alexander died, Antigonus, one of his generals, became King of Macedonia. A quarrel arose between Macedonia and King Ptolemy of Egypt, and Antigonus, with his son Demetrius, made war upon the Egyptian King. Then the commerce and the prosperity of little Rhodes were threatened, for if Alexandria fell, there would be no grain for the Rhodian ships to carry. Rhodes, therefore, sent its fleet to the aid of Ptolemy, and the Macedonians were driven home.

Though little Rhodes saved its shipping, Demetrius, determined that it should be punished for causing his defeat, laid siege to the city. It was a fierce war. The historians of the time say that the Macedonians anchored before the city with three hundred and seventy ships, and with forty thousand men on board. Among the strange instruments of war which they brought was a *helopolis*, or a wooden tower nine stories high, so heavy that 3400 men were required to move it. There was consternation in Rhodes, for its seven thousand citizens and foreigners were too few to resist the enemy. The slaves were armed and were promised liberty if victory should be won; if slain, they were promised a public funeral, their

daughters a dowry, and their sons an education at the expense of the state. It was a struggle for existence; the rich gave their wealth; the women cut off their hair for bow-strings.

With his mighty engines Demetrius made breaches in the wall. Once he broke into the city, but he was quickly repelled. Then the Rhodians tore down their temples and theatres to obtain material for an inner wall about the city. At length, their old friend Ptolemy came to their aid, and for this he was honoured with the name Saviour or Soter. It was still a hard fight of twelve months, when finally the Rhodians succeeded in burning the wooden parts of the engines of war. Demetrius, discouraged, abandoned the siege, and sailed away, leaving behind him all that was left of the great engines of war. It was from the metal of these engines, or with the proceeds, thirty talents, derived from its sale, that the Colossus of Rhodes was built.

Again Rhodes was at peace. Demetrius had been driven away; the city was saved; the Rhodian ships again carried the grain of Alexandria; prosperity returned; the people were happy. Among the citizens was Chares, a sculptor of Lindus, and

a pupil of the renowned Lysippus, who had beautified the city with the colossal statues of the deities. Among his many works, which had won the admiration of all the world, was a chariot of the Sun-god, standing twenty-five feet in height. Why should not a monument be erected to commemorate the victory over Demetrius? Money was at hand, and for what better purpose could be used the thirty talents derived from the sale of the instruments of war abandoned by Demetrius? Who but Chares, who had already adorned the city with statues, was worthy of building one mightier than all the others, one to cause all the world to wonder? To whom but Helios, the protecting god of the city, should the statue be dedicated? Where should the statue stand but on the mole in the harbour where the fleet of the vanquished Demetrius had been anchored? Chares accepted the commission, and so there came into existence the Colossus of Rhodes, the sixth of the Seven Wonders of the World.

The ancient authors have told us little of this great work of Chares, but his was a Herculean task. For twelve long years he laboured, and at last, in the year 280 B.C., his task was completed.

Section by section the brass had been cast in moulds, and was ready to be raised on its foundation in the harbour. It is only a mediæval tradition which claims that the statue stood astride the entrance to the harbour, and that the tallest ships might pass between its legs. The ancients make no mention of so undignified a position. As the monstrous brass legs were erected, the great hollows within were filled with stone masonry, lest the body become top heavy and fall over. Thus the statue grew upward. There is a tradition, but whether it is true or not we may never know, that Chares himself never completed the statue, for when fitting its parts together, he discovered an error in his measurements, and with chagrin he committed suicide, leaving the completion of the work to another.

The height of the Colossus is generally given as seventy cubits, or about one hundred and five feet. The Statue of Liberty in New York harbour stands one hundred and fifty-one feet above its stone pedestal. Within was a spiral stairway leading to the head, where, if mediæval tradition be true, was a beacon light to guide the ships to the city. No authoritative picture of



The Colossus of Rhodes



the statue has survived, and so meagre are the ancient descriptions that every attempt to restore it would be in vain. We only know that it was of brass, and so immense in size, and so beautiful in workmanship, that it won the admiration of the world.

The Colossus of Rhodes was not destined to stand long. Earthquakes are frequent in that part of the world, and in the year 224 B.C., fifty-six years after the statue was erected, the island was violently shaken. Probably the stone masonry of its foundation was not sufficiently strong to withstand the shock. It cracked; the statue swayed back and forth, and fell with a crash. In the fall the sections were wrenched apart, and upon the rocks the Colossus lay like a huge dismembered giant.

The fame of the statue had spread to all lands, and the report of its destruction caused general regret. At once it was proposed to restore it. From the cities throughout Greece, and from Egypt, and even from the hostile Macedonians, came offers of assistance. The oracle at Delphi was consulted to learn the will of the gods, but the oracular response, perhaps controlled by some rival interest, forbade its restoration.

The city of Rhodes, too, suffered severely from the earthquake; its shipping declined; its prosperity departed, and the great statue was left to lie unmolested on the rocks. Three centuries later, when Pliny visited the island, the brass giant was still prostrate. Wondering at its size, he wrote:

Most worthy of admiration is the colossal statue of the sun which stood formerly at Rhodes, and was the work of Chares the Lindian, no less than seventy cubits in height. The statue, fifty-six years after it was erected, was thrown down by an earthquake, but even as it lies, it excites our wonder and imagination. Few men can clasp the thumb in their arms, and the fingers are larger than most statues. Where the limbs are broken asunder, vast caverns are seen yawning in the interior. Within, too, are to be seen large masses of rocks, by the aid of which the artist steadied it while erecting it.

Efforts were made to restore the prosperity of Rhodes, but the city continued to decline. In the year 43 B.C., the Roman Cassius plundered it because the Rhodians would not pay him the forty-five thousand talents he demanded. The next year it became a part of the Roman Empire, and its ships were burned. In 155 A.D., an earthquake completely destroyed the city. In 653 the Arabs,

whose power had been rapidly spreading toward the west, took possession of the island. There upon the rocks the Colossus still lay. It was in the year 672 that the Arab conquerers, under the Caliph Moawia, sold the fallen statue to a Jew of Homs as old metal. Tradition says that the Jew loaded the brass onto nine hundred camels, and, carrying it to Loryma, sold it to the sword makers. One author, estimating the weight of a camel load at eight hundred pounds, asserts that the brass of the statue weighed three hundred and sixty tons.

In time the Venetians, and later the Italians, took the island. In 1309 the Knights of St. John of Jerusalem captured it and rebuilt the city, but every trace of the statue had long since disappeared; even the place where it stood was forgotten. Again the city flourished. Twelve years before Columbus sailed toward America, Mohammed II., the Turk, failed in his attempt to take the island. In 1522 the Sultan Suleiman besieged it with two hundred thousand men, and eighty thousand of them fell before the knights surrendered and were expelled. Since then Rhodes has remained in Moslem hands. The city still exists,

but the entire population of the island numbers but thirty thousand. Perhaps among its two thousand Jews are descendants of the Jew of Homs, who bought the metal of the famous statue and sold it to be converted into instruments of war.

Should you visit Rhodes today you would find an abundance of traces of the Knights of St. John. There stand their city walls, and perhaps some of their houses in the one long street of the modern city. The ruins of the amphitheatre of the early days still exist, and fallen marble columns mark the site of the ancient senate house. The peasant, tilling the fields about the city, now and then uncovers the pedestals of ancient statues, and wonders what they were. You may visit the old rock mole, and the little harbour now filled with sand, but you will look in vain for the place where the famous Colossus stood.

THE SEVENTH WONDER

The Pharos of Alexandria



The Pharos of Alexandria

OFF the coast of Egypt, where the western branch of the river Nile flows into the Mediterranean, there was once a small island of an oblong shape. It was scarcely more than a calcareous rock to which a thin veneer of soil had clung, and the soil was so saturated with the salt of the sea that little other than figs would thrive upon it. But figs flourished there wonderfully, and the natives, forgetting the ancient name Pharos, called the island the Garden of the Fig Trees. The surrounding sea abounded with reefs, threatening the approaching ships, and that is perhaps the reason why the island, lying as it did at the very entrance to Egypt, was never more than a haunt for the pirates who plied their trade along the coast. On the opposite mainland, less than a mile away, was the little Egyptian town of Rakotis; farther on beyond the town lay the large lake of Mariotis. In very ancient times an Egyptian temple stood at Rakotis, and there, too, was

a military station to protect the valley from the unwelcome stranger. Had the Egyptians been a seafaring nation, like the Phœnicians, Rakotis would have rivalled the great cities of Thebes and Memphis.

In the year 332 B.C., Alexander the Great made Egypt a part of his empire. Though that empire included nearly all the known world, it could hardly have been said to possess a capital. To build a city surpassing all others in grandeur, and worthy of his royal residence, was Alexander's ambition. There is a story told that one night in a dream, an aged man appeared and advised him to select the mainland by the island for its site. In obedience to the vision Alexander visited Rakotis and the island, and decided that there the city should be built. The advice of the old man in the vision was good, for the little strip of land between the lake and the sea, with the adjoining island, so well protected by nature, at the entrance to the richest valley in the world, and with a climate unsurpassed, was the ideal seat for the government of his world empire. With his own hand Alexander marked out the boundary of the city by strewing flour instead of the customary

lime along the ground, but the birds came and ate up the flour. It was not an unfavourable omen, so the diviners said, and again he marked out the boundaries of the city larger than before. With him was Dinocrates, the architect. It was Dinocrates who proposed to carve Mt. Athos into a huge statue of Alexander, a statue so immense that its left hand would have held a walled city, and through its right a river would have flowed. It was Dinocrates who was one of the builders of the temple of the goddess Diana of Ephesus, and it was Dinocrates whom Alexander commanded to build his new city.

And the city of Alexandria was worthy of the great architect and of his royal master. It was fifteen miles in circumference, so the ancient writers say, and was surrounded with double walls, fragments of which remain to this day. Its streets were laid out in squares, and two great avenues, intersecting at right angles in the centre of the city, were two hundred feet wide. Wonderful buildings were erected,—royal palaces, temples where both Greeks and Egyptians met in worship, theatres, libraries, museums, and scores of others which were once world famous. The little island

of Pharos in the harbour ceased to be an island, for Dinocrates connected it with the mainland by a causeway, or the Heptastadion, a mile long. Thus the harbour was divided, and even now the western harbour is the best on the Egyptian coast. Alexandria flourished. It attracted the trade of the old Phœnician city of Tyre. Thither the Jews flocked in great numbers. It surpassed Carthage, and soon it became the second city in the world, acknowledging only Rome as a rival. It was the great centre of trade, of culture and philosophy. There was the famous Alexandrian library. There for three hundred years the Ptolemaic kings of Egypt made their homes. The population was estimated at three hundred thousand free citizens and as many slaves, or it was half as large again as at the present time.

But Alexander the Great was destined never to see the city that bore his name. No sooner had he commanded it to be built than he left it in charge of his viceroy Cleomenes, while he marched away to conquer other lands. In the hot marshy plains of Babylonia, the fever, so prevalent there, seized him, and on the night of June 13, 323 B.C., —tradition says it was during a drinking bout,—



Ptolemy Soter



he died, or he was murdered. His body was carried in state to Alexandria, and in the Soma, as his mausoleum at the intersecting of the great avenues of the city was called, he was buried.

Alexander's great empire was divided among his generals, and Egypt fell to Ptolemy. It was the same Ptolemy to whom the title of Soter or Saviour was later given for saving the island of Rhodes from Demetrius of Macedonia. It was he, too, who began the construction of the great lighthouse on the island of Pharos. He died before the lighthouse was completed, but his son, Ptolemy Philadelphus, during the years 285 to 247 B.C., brought the work to an end.

Unfortunately the ancient writers have given us meagre descriptions of the lighthouse which they classed among the Seven Wonders of the World. Pliny, the Roman, who perished at Pompeii during the eruption of Vesuvius in 79 A.D., has given the fullest early account. He says:

> There is another building, too, that is highly celebrated; the tower that was built by the king of Egypt on the island of Pharos at the entrance of the harbour of Alexandria. The cost of its erection was eight hundred talents, they say; and not to omit the magna-

> nimity that was shown by King Ptolemæus on this occasion, he gave permission to the architect, Sostratus of Cnidus, to inscribe his name upon the edifice itself. The object of it is, by the light of its fires at night, to give warning to ships, of the neighbouring shoals, and to point out to them the entrance to the harbour. At the present day there are similar fires lighted up in numerous places, Ostia and Ravenna for example. The only danger is that when these fires are kept burning without intermission, they may be mistaken for stars, the flames having very much that appearance at a distance.

It is a meagre description, so brief that it teaches us nothing of the appearance of the tower. Fortunately the lighthouse was still standing when the Arabs invaded Egypt in the year 616 A.D. They never ceased to admire it, and to weave legends about it, and their descriptions, sifted of the legendary, present a good picture of this wonder of the world.

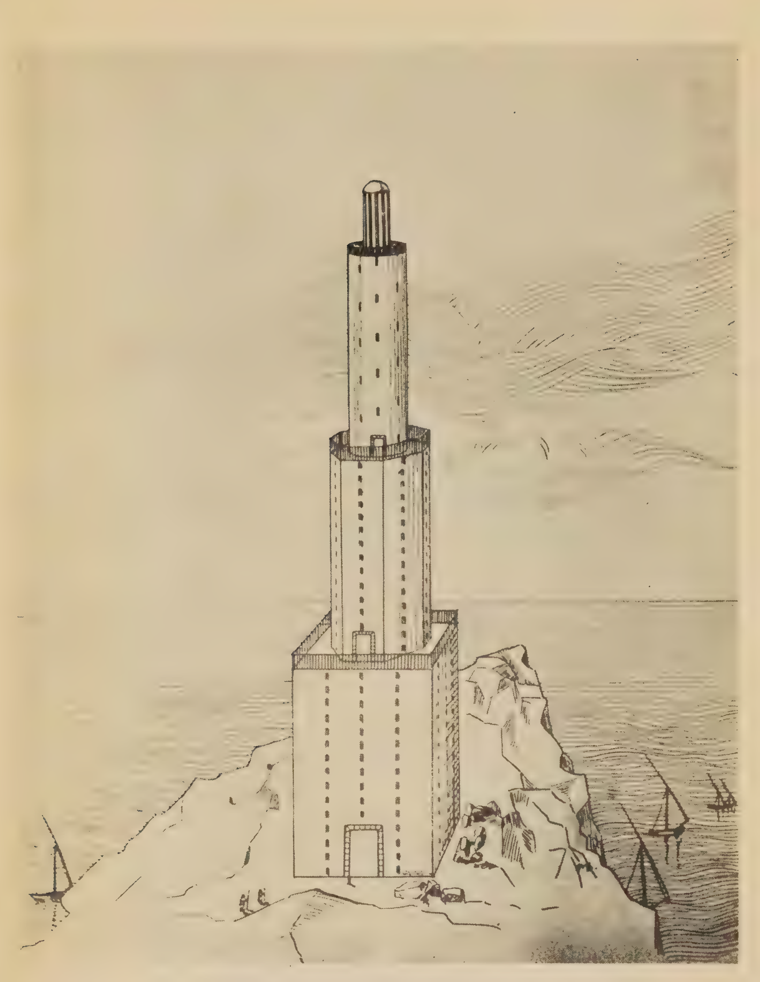
It was Ptolemy Soter who first conceived the idea of building a lighthouse, and for its site he selected the eastern end of the little island of Pharos, for there it might warn the approaching ships of the surrounding reefs. Sostratus, of Cnidus, its builder, was an architect of renown. The Arabs, however, who have always been fond

of weaving the name of Alexander into their traditions, say that he built it, and that before he selected the material for its foundation, "he threw stone, brick granite, gold, silver, copper, lead, iron, glass, and all kinds of minerals and metals into the sea to test them. . . . When they were taken out and examined the glass alone was found of full weight, and unimpaired. So glass was chosen." The glass, so the Arabs tell us, was shaped into the form of crabs, and upon them the lighthouse was built. As crabs of metal were used for the foundations of the obelisks which stood in the city, it is possible that the Arabs supposed that the foundation of the lighthouse was of a similar form. Perhaps the Arabs were correct in saying that the tower was built of the hardest Tiburite white stone, bedded in molten lead, and so firmly set that the joints could not be loosened.

Neither the ancients nor the Arabs have given us the dimensions of the base of the tower; we shall probably never know them. Of its height there are conflicting accounts, varying from four hundred to six hundred feet. The Arab writer Idrisi says: "Its height is three hundred cubits, taking three palms to the cubit, and so its height is

one hundred statures of men." Probably he was not far from correct.

Unlike the modern lighthouse, which is usually a round tower resembling a single shaft reaching into the air, the Pharos consisted of several stages, each smaller than the one beneath it. That each stage was of a different form is certain, yet it is only a tradition which claims that the three stories of the first stage were hexagonal, that those of the second stage were square, and all above were circular. The Arabs, who actually saw the lighthouse while it was still in a perfect condition, describe it as having four stages. The first was square. Upon its summit, 121 cubits, or about 180 feet, above its base, was a broad terrace, commanding a wide view of the sea. It was decorated with columns and balustrades and ornaments of marble. The second stage, of about the same height, was octagonal; upon its summit was a terrace commanding a still wider view over the sea. The third stage was circular, and it too was surmounted with a terrace. The fourth, which was open, consisted of tall bronze columns supporting the dome at the very top. There in the open space beneath the dome, where the view out



A Reconstruction of the Pharos



over the sea extended perhaps a hundred miles, were the lanterns and the fireplaces and the wonderful mirror to signal to the ships. The only decorations upon the exterior walls seem to have been the small windows to admit the light. Upon the base of the first stage was an inscription cut into the marble. It read:

"King Ptolemy, to the Gods, the Saviours, for the Benefit of Sailors."

But if we may believe an ancient legend, the architect Sostratus was unwilling that the royal builder should long enjoy the credit of the construction of the tower. Sostratus, so the story says, first engraving his own name in the solid marble, covered it over with cement, and in the hardened cement he cut the royal inscription. In time the cement crumbled away, and then the inscription, appearing in a new form, read:

"Sostratus, the Cnidian, to the Gods, the Saviours, for the Benefit of Sailors."

Thus the architect obtained all the credit due him, and more.

Of the interior of the Pharos we know only the little that the imaginative Arabs have told us. A shaft reached from the foundation through the

centre to the very summit, up which the fuel for the fires and the other necessaries were raised by a windlass. A spiral stairway, encased with marble slabs, encircled the central shaft; above the second stage the stairway and the shaft occupied the entire structure. The third stage, therefore, which was circular, was probably not far from twenty feet in diameter. Instead of a stairway, the Arabs tell us that an inclined plane led up the first two stages, and so gentle was the slope that a loaded horse might be driven into the highest of the chambers. It is certain that such inclined planes were built in ancient structures; one may now ride a horse to the gallery in the old Church of Saint Sophia in Constantinople.

The vast space in the several stories of the two lower stages was occupied with chambers, yet neither their number nor their arrangement may now be known. One Arab historian says that they were more than three hundred in number, and so intricately arranged that no stranger could find his way among them without a guide. Another, with still greater imagination, informs us that when a party of Moors on horseback entered the lighthouse, they lost their way, and coming

to a crevice in the glass foundation upon which they thought the structure was built, many of them fell within and perished. The purposes the chambers served we may only conjecture, yet we are told that in some of them lived the keepers of the lighthouse; in others were the storerooms, and the lower ones may have been barracks for the soldiers.

But the greatest of the marvels of the Pharos was the mirror on the summit. To the conquering Arabs, it, rather than the structure beneath, was the greatest of wonders, and strange are the tales they related of it. There is a tradition that in the ancient Egyptian town of Rakotis was a dome on a pillar of brass, upon which was a mirror five spans in diameter, and perhaps that of the Pharos was modelled from it. The mirror of the ancients was generally of polished metal, but as to the material of the Pharos mirror the writers disagree. One says that it was a transparent stone; another calls it Chinese iron or polished steel; a third, probably correctly, claims that it was finely wrought glass. Of its size we know nothing excepting it was so large that once when the Arabs removed it they were unable to raise it back to its place.

Nor is it strange that to the Arabs the mirror was a marvel, for they believed that to one standing beneath it, ships out at sea, far beyond the reach of the human eye, were visible. This story has led to the supposition that the mirror was shaped like a lens, and that the invention of the telescope was anticipated by the architect Sostratus. It was said, too, that one might see in the mirror all that was passing in the distant city of Constantinople, the movements of the armies, the departure of the fleet; and that as the ships approached the powerful mirror was turned to reflect the rays of the sun upon them and burn them while still in midocean. Apart from the Arab tales, we may be sure that the mirror reflected the sun's rays farther than the eye could reach, a hundred miles or more out to sea, while the tower was still invisible. In Egypt clouds seldom hide the face of the sun, yet if the sun were invisible, from the fireplaces on the summit of the Pharos rose columns of smoke to guide the sailors, and at night the lanterns, like stars, sent out their less powerful lights.

The cost of the construction of the Pharos, so the ancients have said, was eight hundred talents.

If the Attic talent was meant, that was equivalent to about $825,000 in our money, but if the Egyptian talent, it was twice that sum; yet even that was a trifling amount for so stupendous a structure. Probably the labour was forced, and the greater part of the expense was for the food of the workmen.

Such was the wonderful Pharos, which in height was unequalled in the ancient world, and which compares with the tallest of our buildings. Probably it towered into the air three times as high as any lighthouse of modern times. There it stood century after century through the many changes in the history of Egypt. Alexandria prospered until only Rome was superior; the power of the Ptolemies passed away; in the year 80 B.C., Alexandria became a Roman city, and the names of Cæsar, Antony, and Cleopatra were associated with it. Other centuries passed and Alexandria became Christian; Rome declined, yet the Pharos, unaffected by time, proudly stood to rule over the sea.

In Mecca the Prophet Mohammed was born. Like wildfire his new religion spread over the world wherever his victorious armies marched.

In 640 A.D., Amr, the great Arabian general, after subduing all Egypt, besieged Alexandria for fourteen months, before it fell into his hands. Then he wrote home to the Caliph Omar that he had taken a city of 4000 palaces, 4000 baths, 400 temples and theatres, 12,000 shops, and 40,000 Jews paying tribute. The great library had been partly destroyed during the siege by Julius Cæsar, but it is said that 200,000 of the 700,000 books it once contained still remained. The zealous Amr saw the great collection of books and exclaimed: "If these writings of the Greeks agree with the books of God, they are useless and need not be preserved; if they disagree, they are pernicious, and ought to be destroyed." So the valuable old books of the library were used for fuel in the four thousand baths of the city, and they sufficed for their furnaces for six months.

Still the light of the Pharos shone, no longer to welcome home the ships of the Greeks, but of the Arabs. It seems that the Arabs, poor sailors that they were, still maintained the fires, and continued to relate strange tales of the mirror, tales such as Arabs can relate of the things they do not understand. Upon the Pharos, so they said, stood two

bronze statues. One of them, raising its right hand with the rising of the sun, pointed to the fiery orb all day long, and only at evening, when the sun sank below the western horizon, did the hand fall to rest for the night. The other statue was even more marvellous. It stood silently watching over the sea and only raised its hand to point to the approaching enemy. Were the warning unheeded, and if the enemy drew nearer, the statue cried out with so mighty a voice that it could be heard for miles around to arouse the people to action. This tale, savouring of the Arabian Nights, seems to have no basis of truth, for it is doubtful if two statues ever stood upon the summit of the Pharos.

The wonderful mirror constructed to aid the ships of the Greeks finally caused their destruction; at least the Arabs said that whenever the bronze sentinel upon the lighthouse summit pointed to the Greeks approaching from the sea, and with its mighty voice gave warning to its Arab masters below, the mirror, turned to reflect the rays of the western sun upon the ships, consumed them and all on board with fire. The Greeks were in despair, for the statue and the mirror were against them,

and there was no longer hope of regaining the lost city. At length, during the reign of the Caliph Al-Walid, a courtier of the Greek Emperor resolved to destroy the Pharos by stratagem. Laden with rich gifts for the Caliph, he fled to Alexandria, and professed his desire to become a Moslem. His gifts were accepted. Soon he was accounted one of the most faithful of the Faithful, and a close friend of the Caliph. No sooner had he won the confidence of the Arabs than he related tales of vast treasures of gold and of jewels buried in Syria. Thus he aroused the cupidity of the credulous Caliph, who sent expeditions of treasure seekers to Syria; the treasures, as the Greek had arranged, were found and brought home. The Caliph's desire for hidden wealth was increased, and his Greek friend told him of more wonderful treasures buried beneath the Pharos. To increase the faith of the credulous Caliph the priests were bribed to bring books telling of the treasures. At once Al-Walid despatched troops to the Pharos. The mirror was removed from the summit and half of the lighthouse was torn down before the plot was discovered. The work of destruction then ceased, and when search was made for the treacherous

Greek, it was found that he had fled in the darkness of night. The Arabs then restored the tower with bricks, but they were unable to build it to its former height. They sought to raise the mirror to the summit of their brick tower, but it was so heavy that they could not. Some say that in the effort the mirror fell and was broken to pieces; there is probably some truth to the story.

The Arabs were never a seafaring people. Their ships were few, and they had little use for the Pharos. With the wonderful magic mirror and the statues no longer to aid them, the lighthouse served their enemies rather than themselves, and the fires were no longer burning. In the year 875 Ahmed ibn Tulun had a wooden cupola constructed on the summit, and to it the muezzin climbed to call the people to prayer. So the Pharos, or the Minara, as the Arabs called it, became a minaret, and to this very day with every Moslem mosque there is a tower or minaret, suggestive of the Pharos of Alexandria. Thus a new word was given to most of the languages of the world.

But the Pharos, which had already stood for a thousand years, was not destined to continue

for ever. The wind blew its wooden cupola away to sea. Its foundations began to weaken, and on the 28th of December, 955, an earthquake threw down thirty cubits of its summit. In 969, when the city of Cairo was built, Alexandria was neglected for the new inland city. However, in 1182, while the lower half of the Pharos was yet standing to the height of about one hundred and fifty cubits, a domed mosque was built upon its summit that the Faithful might pray high up where the air was cooled by the breezes from the sea. In 1375, when another earthquake visited Alexandria, only the lower stage of the Pharos survived, and that, badly shattered, soon fell to a heap of ruins. In 1498, when the passage around Africa to India was discovered, and the ships began to pass that way, another blow was given to Alexandria. The city declined; the ruins of the Pharos gradually disappeared, or were used in the construction of a mole in the harbour, and the site where it stood was forgotten.

Excavations in Alexandria are attended with many difficulties, for most of the ancient city lies buried beneath the modern houses. The entire Egyptian coast has subsided, and some parts of

Along the Heptastadion



the city are now covered by the sea. The causeway, or the Heptastadion which Dinocrates built to connect the island with the mainland, has grown with the sand washed up by the sea until it is half a mile wide. It is now thickly covered with houses. Its outer end is known as the Pharos, or Kait Bey, but all that is left of the island is the quarter Ras et-Tin, where the palace of the Khedive stands. In 1898–9 a German expedition sought in the sea for the foundation of the Pharos, but in vain, for the end of the island where it stood has been entirely weathered away. Only in the modern mole are there great stone columns which may have come from its ruins. A modern lighthouse, well worthy of the present Egypt, stands nearby, yet it is insignificant when compared with the Pharos which was the wonder of all the ancient world, and the like of which no modern man has ever seen.





The Modern Pharos of Alexandria



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